
# NAVAL POSTGRADUATE SCHOOL

**MONTEREY, CALIFORNIA**

# THESIS

**PERCEIVED DIFFERENCES IN SELF-REPORTED PROBLEMS WITH SEXUAL HARASSMENT, RACIAL PREJUDICE, AND DRUG MISUSE AMONG USNA VARSITY ATHLETES**

by

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June 2005

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Submitted in partial fulfillment of the
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This thesis examines perceptions regarding sexual harassment, racial prejudice and drug misuse among USNA varsity athletes. Based on previous research, it was hypothesized that both gender and minority status would be predictive of perceptions regarding these behaviors among midshipmen and midshipmen athletes. The thesis also explores the relationship between indicators of athletic participation and experiences and perceptions regarding sexual harassment, racial prejudice and drug misuse. Data from 2735 midshipmen who responded to the USNA Values Survey and 723 midshipmen-athletes who responded to the NAAA Exit Survey were used for analyses. Results of regression analyses indicate that both gender and ethnicity were significant predictors of sexual harassment and racial prejudice but not drug misuse. Athletic status did not significantly influence perceptions. Implications of these findings are discussed for understanding midshipmen perceptions of these behaviors.

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# TABLE OF CONTENTS

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# LIST OF FIGURES

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# LIST OF TABLES

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# I. INTRODUCTION

## A. BACKGROUND

"Sir, The Mission of the United States Naval Academy is: To develop midshipmen morally, mentally and physically…(Reef Points, 2001)" That sound can be heard echoing throughout the halls of Bancroft Hall every summer as the incoming freshmen, referred to as Plebes, recite the Mission during their indoctrination to the Naval Academy. The Naval Academy's Mission becomes so engrained in a midshipman that it can be recalled for years and generations after he or she leaves the Academy. No single developmental aspect of the Mission is meant to be more important than the other. What this means, for the purpose of this thesis, is that the physical development of a midshipmen should not interfere with their moral and mental development.

A question worth asking is: Are varsity athletes at the Naval Academy sacrificing their moral and mental development while honing their physical development? This study will look at "undesirable" behaviors that can arguably be loosely classified in a moral or mental context. Those behaviors will include sexual harassment, racial prejudice, and drug misuse.

This study will provide an assessment of USNA Midshipmen varsity-athlete perceived behaviors by fellow midshipmen varsity-athletes. As addressed above, those behaviors analyzed will be those characterized as "undesirable," and will include sexual harassment, racial prejudice, and drug misuse. The purpose of this thesis is to address any discrepancy between previously studied

differences among these behaviors and various, independent demographics. This should help provide a better understanding of problems and concerns among varsity athletes at the U.S. Naval Academy, and provide the institution and its athletic department with data analysis to confront any issues uncovered with this study.

## B. PURPOSE

Through the literature review, this study will show the reported differences, or lack of differences, between significant variables addressed in the Naval Academy Athletic Association's Exit Survey (*NAAA Exit Survey Data File*, 2001-2004). Those outcome variables to be analyzed include sexual harassment, racial prejudice, and drug misuse. The turn of the new millennium has brought a number of reports on these four problems from college campuses and professional sports.

The problems listed are prevalent just about everywhere in the media today. Racial prejudice and segregation still prove to be a problem today, 50 years after the Brown versus Board of Education ruling was made. A 2001 study indicated that a subtle, racist behavior of avoidance was expressed by non-minority students (Marcus, Mullins, Brackett, Tang, & Allen, 2003, 3). The drug use stories by professional athletes mark the headlines on just about every major sports web page as of 06 December 2004, including Fox Sports (http://www.msn.foxsports.com), Sports Illustrated (http://sportsillustrated.cnn.com), and ESPN (http://espn.go.com). The stories popped up everywhere after the 60 Minutes television show ran a story in which the Bay Area Laboratory Co-Operative announced several of its clients on 05 December 2004. Finally, the Denver

Post's online submission has numerous stories dealing with recent sexual harassment allegations that continue to haunt the United States Air Force Academy (DenverPost.com, 2004).

This information is just the tip of the iceberg with regard to the potential problems that can exist for an organization or college. Further supporting evidence will be provided through the literature review as to the extent of the possible, relevant issues. The undesired behaviors that will be analyzed are going to be broken down into two groups: Uncontrolled behaviors (sexual harassment and racial prejudice) and controlled behaviors (drug misuse).

The first category, or group, of behaviors includes sexual harassment and racial prejudice. These were grouped together because they are behaviors controlled by an outside influence. Typically, observer's reports of racial prejudice or sexual harassment are based on other people's behavior, uncontrolled by the observer. Prejudice and harassment are considered problems that need to be addressed by a society, group, or team in which the problem exists. Rosen and Martin (1998) suggest that males and females view an act or behavior of sexual harassment differently, stating that "men who experienced (sexual) behaviors were less likely to acknowledge harassment than women who experienced these behaviors" (Rosen, & Martin, 1998, p. 239). Similarly, 5% of white college students reported a first hand experience of racism, while 30% of black college students reported that they had experience racist behavior first hand (Marcus et al., 2003, 7).

The second behavior includes drug misuse. Drug misuse is a self-inflicted problem, controlled by an individual, and is usually a problem that needs to be addressed by the

offending person, not necessarily society. In the 2001 NCAA Study of Substance Use Habits, white college athletes were 7.3% more likely to use marijuana (the drug with the largest percent difference between racial group usages) than their black counterparts (NCAA Survey, 2001). Unfortunately, the study does not do a similar comparison of male athletes versus female athletes except in a sport-specific comparison.

When comparing two similar sports by gender, the following was found: Male basketball players used marijuana at a rate of 23.6%, while female basketball players used marijuana at a rate of 21.1%. While the male versus female comparison does not show that same disparity between usage rates as that of whites versus blacks, it will be looked at when analyzing the NAAA Exit Survey data.

## C. METHODOLOGY

### 1. USNA Values Survey

#### *a. Breakdown*

Although the NAAA Exit Survey, to be addressed below, provides the basis for this study, the USNA Values survey (*USNA Values Survey Data File*, 2002-2004) must first be analyzed. The purpose for this is to establish a background between athlete and non-athlete perceptions at the Naval Academy. Once it is determined what, if any, this relationship is, then the researcher can further analyze these perceptions specific to varsity athletes at USNA. The primary purpose of this study is to analyze the effect that athletic characteristics have on the "undesirable" outcomes addressed in the NAAA Exit Survey. However, to do this successfully, we must first analyze

similar types of data provided by midshipmen as a whole, both athletes and non-athletes alike.

The USNA Values Survey is a voluntary survey open to all upper class midshipmen (sophomores, juniors, and seniors). It is a detailed, 130 question survey in which midshipmen report on different aspects of life at the Naval Academy.

***b. Subjects***

As previously stated, this survey is open to all Third Class, Second Class, and First Class Midshipmen (sophomores, juniors, and seniors, respectively). Although it is not mandatory, it is highly encouraged for the Naval Academy student body to participate. In order to adequately compare the results of this survey to the NAAA Exit Survey, only senior midshipmen responses were analyzed. Thus, if a midshipman responded to the survey over multiple years, including their senior year, only their senior year responses were analyzed. In addition, if a midshipman participated in the survey during their sophomore and/or junior year, but not their senior year, then their data were not analyzed. The only data of interest to this study are the perceptions and experiences of First Class Midshipmen.

***c. Protocol***

Although the USNA Values Survey includes a variety of questions, the study examines a subset of 12 questions dealing with sexual harassment experiences, sexual harassment perceptions, and racial prejudice perceptions. The questions are listed below:

How often in this past year have you been subject to the following from other midshipmen (sexual harassment experiences):

(1) Unwanted whistles, calls, hoots, or yells.

(2) Unwanted teasing, jokes, remarks, or questions.

(3) Unwanted looks, stares, or gestures.

(4) Unwanted or offensive e-mails/ phone calls/ messages.

(5) Unwanted pressure for dates.

(6) Unwanted touching or pinching.

(7) Demeaning or degrading comments.

To what extent do you agree or disagree with each of the following statements (sexual harassment perceptions):

(1) Inappropriate physical advances of a sexual nature are a problem at USNA.

(2) Sexual harassment has impeded my development as a midshipman.

(3) Consensual sexual misconduct is a common occurrence in Bancroft Hall.

To what extent do you agree or disagree with each of the following statements (racial prejudice perceptions):

(1) Negative attitudes towards minority midshipmen are a serious problem at the Naval Academy.

(2) Racial or ethnic prejudice has impeded my development as a midshipman.

The purpose of first addressing these questions is to provide a comparison among these undesirable outcomes between midshipmen-athletes and regular midshipmen. Further explanation of these questions will be provided in Chapter III of this study.

**2. NAAA Exit Survey**

***a. Breakdown***

Senior (or First Class) Midshipmen who participated in a varsity sport(s) at the Naval Academy are required to participate in a Naval Academy Athletic Association "Exit Survey" at the completion of their sport's season (*NAAA Exit Survey Data File*, 2001-2004). There are three seasons each year (fall, winter and spring) with each season supporting its own unique sports. The Naval Academy's sports' schedule is shown in Table 1. The NAAA survey is conducted by all senior Midshipmen whose eligibility for a specific sport has expired, meaning he/she can no longer play in that particular sport. For example, if a football player has been a member of the varsity football team for four years, he may no longer play football. Accordingly, he must then complete the exit survey at the conclusion of the fall sports season.

**Table 1. Naval Academy Varsity Sports by Season**

| Fall | Winter | Spring |
|---|---|---|
| Cross Country (M) | Basketball (M) | Baseball (M) |
| Cross Country (W) | Basketball (W) | Crew, Hvywt (M) |
| Football (M) | Gymnastics (M) | Crew, Ltwt (M) |
| Football, Sprint (M) | Rifle (M&W) | Crew (W) |
| Sail, Offshr (M&W) | Squash (M) | Golf (M) |
| Soccer (M) | Swimming (M) | Lacrosse (M) |
| Soccer (W) | Swimming (W) | Sail, Intrcol. (M&W) |
| Volleyball (W) | Track, Indoor (M) | Tennis (M) |
| Water Polo (M) | Track, Indoor (W) | Track, Outdoor (M) |
| | Wrestling (M) | Track, Outdoor (W) |

Note: *Compiled from the USNA Athletic Association webpage: www.navysports.com*

The NAAA Exit Survey is a census survey of all senior varsity athletes, conducted in support of the National Collegiate Athletic Association's mandated exit interviews. In accordance with the National Collegiate Athletic Association Division I Bylaws, these interviews are to be conducted "in each sport with a sample of student-athletes whose eligibility has expired (NCAA Division I Bylaw 6.3.2)." To augment these mandated interviews, additional information is gathered with the exit surveys.

The survey is conducted online. The USNA Office of Institutional Research compiles the results. As per the NCAA Bylaw 6.3.2 for Exit Interviews, confidentiality must be maintained. This helps to promote more open and honest feedback among the ineligible athletes without fear of retribution. Although there is no mandate stating that an exit survey is required, the Naval Academy and its athletic department conduct this survey on a confidential basis as well. The NAAA conducts the interviews with members of its faculty as stated in the Faculty Athletics Representative Handbook (Hagwell, 1998). For all intents and purposes,

the NAAA has established the same rules for its survey as exist for the exit interviews.

There are no stipulations of what can be asked during the interviews (and therefore, the survey). As stated in Bylaw 6.3.2:

> Interviews shall include questions regarding the value of the students' athletic experiences, the extent of the athletics time demands encountered by the student-athletes, proposed changes in the intercollegiate athletics and concerns related to the administration of the student-athletes' specific sports (NCAA Div I Bylaws, 2003).

In addition to addressing the aforementioned topics with numerous questions, the survey also asks several questions dealing with the moral development and conduct of Midshipmen varsity athletes. Some of these questions address issues of sexual harassment, racial prejudice, and drug misuse.

***b. Subjects***

As stated, the subjects who complete the survey are varsity athletes at the completion of their sport's season. In addition to being a varsity athlete, they must also be a senior, whose eligibility has expired for the sport being surveyed. The survey has been given to all USNA Midshipmen, who fit the criteria, from the years 2001-2004. The Academy's Office of Institutional Research has maintained a data base of this information.

In addition to the census survey conducted by the USNA/NAAA, the National Collegiate Athletic Association has conducted its own survey on varsity collegiate athletes.

This study was concluded in June 2001 by the NCAA Research Staff and is available online. The study is the fifth in a series that measures the substance-use patterns of NCAA college student-athletes. Previous dates of the study include 1985, 1989, 1993, and 1997. The study was a sampling of student-athletes composed of 12% of all NCAA athletes and covering all sports in the NCAA. The survey was not limited to senior athletes alone, therefore all classes were allowed to participate in the survey.

***c. Protocol***

The intention of this portion of the report is to examine perceptions regarding, sexual harassment, racial prejudice, and drug misuse. The outcome variables to be explored in depth are from the following questions:

(59) In your view, to what extent is sexual harassment a problem among ATHLETES at USNA?

(60) In your view, to what extent is racial prejudice a problem among ATHLETES at USNA?

(63) In your view, to what extent is drug misuse a problem among ATHLETES at USNA?

The purpose of addressing these questions is to provide a detailed look at varsity athletes in particular. Further explanation of these questions will be provided in Chapter III of this study.

**D. SURVEY SUMMARY**

This thesis will examine athlete's perceptions across two sets of data, which include the USNA Values Survey and the NAAA Exit Survey. The USNA Values Survey includes a series of questions assessing sexual harassment experiences and perceptions, and racial prejudice perceptions. The NAAA Exit Survey includes three specific items addressing

athlete's perceptions regarding sexual harassment, racial prejudice, and drug misuse. Figure 1 presents a conceptual model of the relationship between demographic and athletic characteristics on both controlled and uncontrolled behaviors.

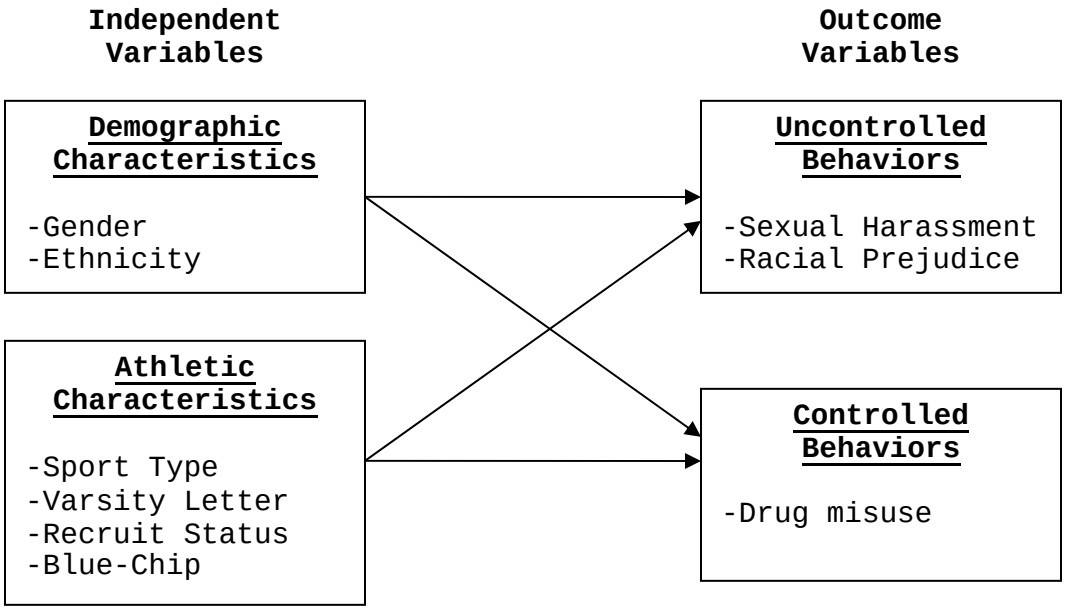


**Figure 1. Conceptual model of dependent variables and their associated impact on the perceptions of Sexual Harassment, Racial Prejudice, and Drug Misuse among USNA Midshipmen-Athletes based on the NAAA Exit Survey.**

## E. RESEARCH QUESTIONS

Data from both the USNA Values Survey and the NAAA Exit Survey are used to examine the following question:

> How do differing demographics perceive acts of sexual harassment, racial prejudice, and drug misuse among their fellow midshipmen varsity-athletes?

In addition to the primary research question, there are also four secondary questions that will be covered in the scope of this thesis:

(1) What are the perceptions female midshipmen varsity-athletes have of sexual harassment?

(2) What are the perceptions that minority midshipmen varsity-athletes have of racial prejudice?

(3) Are there any other interesting variable linkages not addressed by supporting literature?

As already stated, this research will analyze data from the USNA Values Survey and the NAAA Exit Survey to determine the perceptions midshipmen-athletes have of their fellow athletes at the U.S. Naval Academy.

## F. ORGANIZATION OF STUDY

This thesis is divided into five chapters. Chapter II reviews previous studies related to college athletics, the "undesirable" characteristics among college students, and the "undesirable" characteristics among military members. Chapter III describes the data set and methodology used for the statistical analysis. Chapter IV presents the results of the analyses and determines whether or not the proposed hypotheses are supported. Chapter V provides a summary of the main findings and outlines a series recommendations based on the findings. This chapter also provides suggestions for future research.

# II. LITERATURE REVIEW

## A. INTRODUCTION

The military, athletics, and higher education (universities and colleges) are institutions that have been in existence since recorded history documents. More importantly, these three institutions have been in existence in one form or another throughout America's history. Since 1845, the United States Naval Academy has provided a culmination of these three institutions in a single locale.

There are 29 intercollegiate, varsity sports at the United States Naval Academy (USNA). Those sports include 18 men's sports, eight women's sports, and three co-ed sports (the breakdown of these sports can be seen in Table 1). One source of pride for the Naval Academy, especially for the Naval Academy Athletic Association (NAAA), is that they remain highly competitive in all of their varsity sports. Remaining competitive at the Division I-A level (the highest level of college sports), is no small feat. What makes this even more impressive is the fact that USNA boasts close to twice as many varsity sports as large schools like Florida State University (eight men's and nine women's) with one-tenth of Florida State's student body - 4,000 at USNA versus 40,000 at FSU (Florida State University, 2004). Athletics are simply a way of life at the Naval Academy.

### 1. Rules and Regulations

Being that the Naval Academy is so rich in intercollegiate athletics, it must abide by the rules and regulations imposed by the governing body of college athletics, the National Collegiate Athletic Association (NCAA). The NCAA, officially constituted in 1906, has provided discussion groups and rules-making bodies to ensure that intercollegiate athletics are played fairly. The association establishes and enforces all rules implemented by the NCAA, ranging from recruiting and financial aid to sport-specific rules (NCAA, n.d., 2-3).

In addition to the rules and regulations imposed by the National Collegiate Athletic Association, student-athletes at the Naval Academy must also abide by military standards. These standards are refined and specifically geared toward the Naval Academy student body by the Commandant of Midshipmen through the Commandant of Midshipmen Instruction (COMDTMIDNINST 5400.6G, 2004). The specifics of this instruction will be addressed later in this chapter, but do include rules dealing with discrimination, sexual harassment, and drugs.

### 2. Is the Wrong Sacrifice Being Made?

The U.S. Naval Academy has proven its competitive edge in the 2003-2004 sports seasons alone. The Navy football team sported an 8-5 win-loss record in 2003, earning itself the coveted Commander-in-Chief's Trophy[1], as well as a bid to play in the EV1.net Houston Bowl Game. That was topped in the 2004 football season by a remarkable 10-2 win-loss record, including a victory in the Emerald Bowl, and

[1] The Commander-in-Chief's Trophy is awarded to the service academy (Air Force Academy, Military Academy, Naval Academy) that beats both of its sister academies in regular season football.

earning the Commander-in-Chief's Trophy for the second straight year. In addition to the football team's stellar performance, the Naval Academy also earned high honors in the lacrosse world by becoming number two in the nation, falling to Syracuse by one goal in the National Championship game (USNA Athletic Association, 2005).

It should be no mystery that collegiate athletes often face more time pressure on their daily schedules than non-athletes. According to Gurney and Stuart (1987), this is shown to be true among freshmen, new to the collegiate lifestyle. A concern among freshmen student-athletes, and arguably among all student-athletes, is the ability to balance their academic responsibilities as well as their athletic commitments (Gurney & Stuart, 1987, pp. 298-302). It is also noted that "anyone in collegiate academia 'cannot dismiss the often extensive time commitment required of intercollegiate football and basketball players,'" in addition to athletes, which must handle the time constraints placed on them by their sports (Harvey, 2003, pp. 8-9). This time management demand is further exaggerated at the Naval Academy given the mandatory events on any given day in addition to scheduled class time and athletic periods. Given the Academy's prestigious athletic program, is there a price that its athletes are paying to continue to build their competitive edge? Are midshipmen-athlete professional and personal growths being sacrificed in order to better serve the physical aspect of their growth?

## B. IMPORTANCE OF ATHLETICS IN COLLEGE

Athletics, both collegiate and professional, have taken a negative spotlight in the media within the past few years. This recently culminated with the U.S. Congress convening in the winter of 2005 to investigate Major League baseball and the anabolic steroid use among its players. Despite this, and numerous other incidents that have plagued college sports in the recent past, athletics are an integral part of undergraduate education.

### 1. Graduation Rates

Rishe (2003) found that athletes graduate at a higher rate than non-athletes among all Division I (I-A, I-AA, and I-AAA) schools, as shown in Table 2. Over all three categories of schools, non-athletes graduated at a rate of 54.62-percent whereas their athlete counterparts graduated at a rate of 58.15-percent. That means, being an athlete made you more than 3.5-percent more likely to graduate than if you did not compete in intercollegiate athletics. Male athletes graduated at 52.46-percent, exactly one point higher than male non-athletes, which graduated at 51.46-percent. If those numbers appear low, compare them then to female athletes who graduated at 67.51-percent. This is more than 10 percentage points higher than female non-athletes who graduated at 57.21-percent. Black athletes graduate at a lower rate than their white contemporaries; however, it is still at a higher rate than black non-athletes (Rishe, 2003, pp 412-414).

**Table 2. Graduation Rates of Undergraduates and Student-Athletes**

| | Division I-A, I-AA, and I-AAA Graduation Rates | |
|---|---|---|
| | **Non-athletes** | **Athletes** |
| Overall | 54.62% | 58.15% |
| Gender: | | |
| Male | 51.46% | 52.46% |
| Female | 57.21% | 67.51% |
| Race/Gender: | | |
| White Male | 52.98% | 55.56% |
| White Female | 58.89% | 68.52% |
| Black Male | 37.39% | 43.32% |
| Black Female | 44.92% | 58.86% |

Note: *(Rishe, 2003, 413)*

One distinct reason that athletes are graduating at a higher rate than their non-athlete counterparts is that coaches are recruiting higher caliber students. The appealing recruit is one who is responsible, attentive to academic demands, leading them to become more dependable in game situations (Gurney & Stuart, 1987, pp 299-300). With that said, Harvey did not find that Varsity Athlete Status was a significant predictor in a midshipman's performance at USNA (Harvey, 2003, p. 27). There is something to be said though, on an athlete's competitiveness and determination that may lead them to a higher graduation rate.

**2. Fleet Performance**

Leskovich (2000) found that varsity athletes who lettered at the Naval Academy were significantly more likely to be promoted to the U.S. Navy rank of O-4 (Lieutenant Commander). Athletic achievement in an

individual sport, defined by Leskovich (2000) as a sport "in which an individual could…advance competitively without the rest of the team" (p. 32), had a positive effect on the probability of promotion to LCDR of 7.7-percent. The positive effect on the probability of promotion to LCDR is also seen in those midshipmen-athletes participating in a team sport, again defined in Leskovich (2000, p. 32), by 11.4-percent. Leskovich (2000) also went further and defined "blue-chip" athletes as "those marked by NAAA as top-notch athletes (Leskovich, 2000, p. 27). These "blue-chip" athletes, who were members of a varsity team sport, have an 18.9-percent higher probability of promotion to LCDR than non-athletes.

Leskovich's (2000) thesis findings did not show what causes athletes to promote at higher rates than non athletes. It did, however, support his hypothesis that there is some intrinsic value added by achievement in varsity athletic programs that follows those athletes into the Fleet. One suggested reason is that when an athlete faces an opponent, there is some unknown in the equation of how that opponent will act. This creates the need for an athlete to adapt to the uncertainty. "Much like the military, this ability to adapt and overcome can mean the difference between victory and defeat" (Leskovich, 2000, p. 53). One thing is clear through Leskovich's (2000) research, varsity athletics are a crucial institution at the Naval Academy whose effects can be felt for years in the Fleet.

## C. UNCONTROLLED BEHAVIORS

As stated earlier, "uncontrolled behaviors" are defined as behaviors of sexual harassment or racial prejudice. The reason these two behaviors are grouped together is because the victim of the said behaviors generally does not have any control over stopping it. At least, they do not have any control over stopping it before it starts.

### 1. Racial Prejudice/Discrimination

Racial prejudice will be defined as discrimination for this thesis. The reason for this is due to the fact that discrimination is defined by the Commandant's Instruction (COMDTMIDNINST 5400.6G, 2004). Because the "Exit Survey," on which this research is based, is administered to midshipmen, it makes sense to use the regulations that govern the midshipmen's behaviors to define the "undesirable" behaviors.

The Commandant's Regulations Manual defines discrimination as:

> Any act or failure to act that is based in whole or in part on a person's race, color, religion, sex, or national origin and adversely affects privileges, benefits, dignity, working conditions, differential treatment in employment conditions in past of present based on race, color, religion, sex, age or national origin (COMDTMIDNINST 5400.6G, 2004, p. 2-21).

This defines the standard to which the midshipmen of the Naval Academy are held to. When answering the question dealing with racial prejudice from the NAAA "Exit Survey," this definition should be what the midshipmen use to base their response.

### *a. Racial Discrimination on College Campuses*

Although civil rights legislation has made great strides in the last century, one of the most pressing social problems in the U.S. is racism (Marcus et al., 2003). Kent (1996) found that there is a new form of racism prevalent among colleges and universities today. This modern racism plaguing our campuses was also observed by Vitale (2001), and defined it as a "subtle racism" that is "expressed covertly by non-minority students through behaviors of avoidance" (Biasco, Goodwin, & Vitale, 2001, p. 524). Racism of any sort, whether overt or subtle, is simply unacceptable in a government institution that is designed to train Naval Officers.

According to Marcus et al. (2003), 66-percent of black students reported experiencing racial discrimination versus 41-percent of whites. Also, 85-percent of blacks and 74-percent of whites believed there was an existence of racial hostility. Finally, 40-percent of blacks indicated a perception of a discriminatory experience with a professor while only 11-percent of whites experienced the same (Marcus, et al., 2003). In each of the above categories, the blacks were more apt to recognize racism than whites. "These racial discrepancies suggest that both the experiences and perceptions of minorities and Whites vary broadly" (Marcus, et al., 2003, 10).

### *b. Racial Discrimination in the Military*

There is a perception among black officer in the U.S. Navy that their evaluations, referred to as Fitness Reports (FITREPS), are racially biased. A 1993 Navy Equal Opportunity Sexual Harassment (NEOSH) Survey found that 38-percent of black officers agreed with the statement "The

Navy's performance evaluation system favors White males" (Thomas, Edwards, Perry, & David, 1998, p. 128). Compare that to the 3-percent of whites who agreed with that statement and you will see a severe incongruity between the views of whites and blacks on the Navy's FITREP system. Additionally, black officers leaving the Navy often cited a lack of fairness in performance evaluations as their primary reason for resigning. This evidence is further supported by Rosenfeld, Newell, and Le (1998), stating "those who have experienced racial…discrimination are less satisfied with the Navy, have higher intentions of leaving, and lower intentions to remain in the Navy until retirement" (pp. 69-70). White officers primarily listed family separation as their principal concern for getting out of the navy (Thomas, Edwards, Perry, & David, 1998).

Thomas et al. (1998) had statistically significant findings from their research. Noted by Johnson (2001), these findings were consistent with earlier studies, in which descriptors used in black officer FITREPS and white officer FITREPS were racially different. These different descriptors, such as "thorough" for white officers and "dedicated" for black officers, are favorable to both races (Johnson, 2001, pp. 41-42). Naval officers with selection board experience were given each list of descriptors to determine which list appeared to be more favorable. It was concluded that both lists were equally favorable. There was no clear evidence of racial bias in the FITREP system (Thomas et al., 1998).

Johnson (2001) took the lack of clear evidence of racial bias found by Thomas et al. (1998), and went one step further with it. Johnson (2001) found that there were

certain words, or descriptors, that were found to be significantly related to the recommendation for promotion in officer's FITREPS. It was then determined if one race was more likely to receive these descriptors over the other. What was found was that three of the four descriptors which had a strong, positive correlation with promotion, were more often ascribed to white officers. The three descriptors which were less favorable for a promotion recommendation were all more often attributed to black officers (Johnson, 2001).

***c. Racial Prejudice Conclusions***

There are undoubtedly differing perceptions among blacks and whites with regard to racial biases, both on our campuses and in our military. Because the United States Naval Academy is a military, undergraduate establishment, these finding prove to be very important to this study. Also important to note is that these perceptions are often well founded, in that there is some sort of racial bias that is in existence to create these perceptions.

**2. Sexual Harassment**

Like racial prejudice/discrimination, this study will define sexual harassment in accordance with the Commandant's Regulations Manual. COMDTMIDNINST 5400.6G (2004) defines sexual harassment as:

> A form of sex discrimination that involves unwelcome physical advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when:
>
> (1) Submission to or rejection of such conduct is made either explicitly or implicitly as term or condition of a person's job, pay or career.

(2) Submission to or rejection of such conduct by a person is used as a basis for career or employment decisions affecting that person; or

(3) Such conduct interferes with an individual's performance or creates an intimidating, hostile, or offensive environment (COMDTMIDNINST 5400.6G, 2004, p. 2-21).

The instruction also lists and defines three specific forms of sexual harassment: Physical harassment, verbal harassment, and visual harassment. Much like the question in the "Exit Survey" that deals with racial prejudice, the above definition should be the meaning considered by midshipmen-athletes when answering the question involving sexual harassment.

### *a. Sexual Harassment on College Campuses and at Military Academies*

Research conducted by Fisher, Cullen, and Turner (2000) for the Bureau of Justice Statistics focused on the sexual victimization of women on college campuses nationwide. This was research was sparked due to a growing concern that college campuses are not impervious to the types of sexual criminal activity seen in society, but rather that they have become the local "hot spots" for this type of activity (Fisher, Cullen, and Turner, 2000, p. 1).

The United States General Accounting Office (GAO) conducted a report for the Subcommittee on Defense, Committee on Appropriations, House of Representatives on perceptions of student life at the military academies (2003). This study consisted of data gathered on both student and faculty perceptions. It found that 54% of the males reported that the perception of the overall

atmosphere for women at the Naval Academy was "good or excellent." This is compared to only 27% of the females who believed the same. A "poor or below average" perception of the atmosphere for women yielded results of 22% of males feeling this way compared to 43% of females. The full results can also be seen in Table 3 below (GAO Report, 2003, pp. 25-26):

**Table 3. Perceptions of Male and Female Students of the Overall Atmosphere for Women at USNA**

| | Males | Females | Overall |
|---|---|---|---|
| Poor or below average | 22% | 43% | 25.8% |
| Average | 24% | 30% | 25% |
| Good or excellent | 54% | 27% | 49.3% |

Note: *(GAO Report, 2003, pp. 25-26)*

Also noted in the GAO survey were the perceptions male and female students had on the emphasis USNA placed on the prevention of sexual harassment. The results show that 48% of males perceive the emphasis to be "generally or greatly over emphasized" versus 24% of females. The full results can be observed below in Table 4 (GAO Report, 2003, pp. 23-24):

**Table 4. Perceptions of Male and Female Students of the Emphasis USNA Places on Prevention of Sexual Harassment**

| | Males | Females | Overall |
|---|---|---|---|
| Greatly or generally underemphasized | 4% | 21% | 7% |
| Emphasis is about right | 48% | 55% | 48.9% |
| Generally or greatly overemphasized | 48% | 24% | 44.1% |

Note: *(GAO Report, 2003, pp. 23-24)*

There is disconnect between male and female views when it comes to gender related issues. Males, particularly at USNA, are less likely to perceive there to be any sort of problems with regard to the atmosphere for women at the Academy than females are. They are also more likely to perceive the Academy places an overemphasis on sexual harassment prevention.

***b. Sexual Harassment in the Military***

Rosenfeld, Newell, and Le (1998) found that military personnel who experienced gender discrimination had the same intentions of those who experienced racial discrimination. These military members were less satisfied with the Navy and had high intentions of getting out of the Navy, therefore making them less likely to remain until retirement.

In the same NEOSH Survey discussed in the racial prejudice section, similar perceptions were found among females as was found among blacks. It was determined that women had consistently less positive perceptions of the Navy's Equal Opportunity (EO) climate than men. These perceptions were the same for officers as it was for enlisted. Black females had the least positive EO

perceptions among both officers and enlisted than any other subgroup of individuals (Rosenfeld, Newell, and Le, 1998). On a positive note, data from the NEOSH Survey did show that the average responses of all subgroups showed that they felt the Navy's EO climate was positive. However, the perceptions among the differing groups show that males (specifically white males) have a higher opinion of the EO climate than the females do (Rosenfeld, Newell, and Le, 1998).

These perceptions of sexual harassment are more then just perceptions - they are well founded on first-hand experience. In Culbertson and Rosenfeld's (1994) assessment of the 1989 and 1991 NEOSH Surveys, it was found that reports of sexual harassment were on the rise in the year between surveys. In 1991, 44-percent of female enlisted and 33-percent of female officers reported being sexually harassed (a rise of 2-percent and 7-percent, respectively). Compare that to the 8-percent of male enlisted and 2-percent male officer reports (a rise of 4-percent and 1-percent, respectively). A possible explanation for the rise in numbers is due to the Navy's 1991 Tailhook Association convention. Regardless of what caused the percentage hike, the fact that there is a 36-point difference in female and male enlisted reports of sexual harassment, and 31-point difference in the officer numbers, there is a drastic disparity between males and females with regard to experiences of sexual harassment.

Another interesting finding by Culbertson and Rosenfeld (1994) was the fact that a higher rate of the female reports of sexual harassment was among the junior officer ranks (O-1 to O-2). 38-percent of female officer

reported that they had experienced sexual harassment compared to 33-percent for O-3 to O-4 and 24-percent for O-4 to O-6. Unfortunately the survey does not reveal what rank the individuals were who committed these acts of harassment. It is important to note that midshipmen at the Naval Academy are junior to O-1s and therefore are younger. Based on the finding of the officers and enlisted who experienced sexual harassment, the junior members experienced the greatest amount of sexual harassment.

### 3. Racial Prejudice and Sexual Harassment Conclusions and Hypothesis's

Dansby and Landis (1998) brought up an interesting, untested hypothesis as to why the perceptions among minority female officers and males differ with regard to the Navy's EO climate. This hypothesis, broken down into three parts, could explain why there is a gap in the perceptions among whites and minorities, and males and females. The three hypothesis's are as follows:

(a) the training they (minorities and females) receive prior to entry, which emphasizes the professional nature of the officer's role and may lead (minority and) women officers to believe they will be treated with greater respect as officers.

(b) their (minorities and females) generally higher education level, creating broader horizons and loftier aspirations.

(c) a general perception based on comparison with civilian society of a positive EO climate in the military (Dansby and Landis, 1998, p. 101).

It is not a far stretch to think that midshipmen at the United States Naval Academy have the same beliefs as is mentioned in the listed hypothesis's.

There is no literature that suggests the extent to which sexual harassment and racial prejudice are prevalent among athletics, specifically that of college athletics. It will be interesting to see what the USNA/NAAA "Exit Survey" reveals about such behaviors. It is hypothesized that the women who completed the survey will have a higher perception of sexual harassment then the males. Likewise, it is believed that the minorities surveyed will have a higher perception of racial prejudice being more of a problem then whites (white males in particular).

## D. CONTROLLED BEHAVIORS

Controlled behaviors for this study are defined as drug misuse. This area of discussion is addressed in the "Exit Survey." Although it is arguable that the victims of drug misuse stretch well beyond the actual users, the victims would vary on a case-by-case basis. In every situation though, there is always the common victim - the individual misusing drugs. This behavior has been labeled as "controlled" because the victim, who is also the user, is in control of his or her actions.

### 1. Drug Misuse

The Commandant of Midshipmen clearly states his regulations on drug use in his instruction (COMDTMIDNINST 5400.6G, 2004). Introducing the topic, he states that "the unauthorized use, possession, or willful involvement with drugs, narcotics, marijuana, or steroids constitutes a serious breach of discipline" (COMDTMIDNINST 5400.6G, 2004, p. 3-31). In addition to this, the instruction states:

> Midshipmen shall not use or possess marijuana; use or possess narcotics, steroids, or controlled substances except as prescribed by a competent medical authority or the U.S. armed forces (COMDTMIDNINST 5400.6G, 2004, p. 3-32).

Midshipmen who perceive a drug misuse problem will most likely see a violation of the above regulation.

***a. Drug Misuse Among College Athletes***

The National Collegiate Athletic Association (NCAA), the governing body of college athletics, lists in detail the drug classes, with examples, of that are banned among intercollegiate athletes. A list of these drugs can be found at www.ncaa.org/health-safety. In light of this, the NCAA conducted a survey in 2001 (NCAA Research Staff, 2001). This anonymous survey was used to study the substance use habits of intercollegiate athletes and included athletes from all three divisions of intercollegiate athletics (Divisions I, II, and III).

There were many findings revealed by the NCAA's research (NCAA Research Staff, 2001), many of which were not good. Among the group of Division I student athletes (the division that USNA is a member), the use of all ergogenic drugs (drugs used to enhance one's performance, such as amphetamines, anabolic steroids, and ephedrine) rose from 1997 to 2001, as can be seen in Table 5.

**Table 5. Patterns of Ergogenic Drug Use Among Division I Intercollegiate Student-Athletes**

| Drug Type | 1997 | 2001 |
|---|---|---|
| Amphetamines | 2.5% | 3.1% |
| Anabolic Steroids | 1.2% | 1.6% |
| Ephedrine | 3.0% | 3.6% |

Note: *(NCAA Research Staff, 2001, Table 2)*

These types of drugs have entered the limelight recently in professional sports, especially, as stated earlier, that of Major League Baseball.

One initial assumption of mine was that college age students and younger would be inclined to use these performance enhancing drugs, much like the professional athletes they see on a daily basis. Surprisingly, that was not even an answer option in the NCAA Research Staff's (2001) survey. The number one reason student athlete's put listed as reasons to improve their performance (anabolic steroids - 42.7-percent; Ephedrine - 23.6-percent). This response was also true for all nutritional supplements (27.3-percent), many of which fly under the U.S. Food and Drug Administration's (FDA) radar, as they do not strictly regulate the supplement industry. The number one reason for amphetamine usage was for social and personal reasons (27.4-percent), but to improve athletic performance was a close second (23.8-percent). These results are supported by Schwenk and Costley (2002), finding that many athletes start using ergogenic drugs at an early age (high school and earlier) in an attempt to improve their performance.

On a positive note, social drug use appears to be on the decline, as is judged from the 1997 to 2001 statistics (NCAA Research Staff, 2001). Marijuana and

psychedelics use decreased among Division I student-athletes over this span of time, while cocaine use had a slight rise. These percentages can be seen in Table 6.

**Table 6. Patterns of Social Drug Use Among Division I Intercollegiate Student-Athletes**

| Drug Type | 1997 | 2001 |
|---|---|---|
| Cocaine/crack | 1.2% | 1.8% |
| Marijuana/hashish | 26.4% | 25.3% |
| Psychedelics | 4.6% | 4.3% |

Note: *(NCAA Research Staff, 2001, Table 3)*

The number one reason student-athletes listed for continued use of these social drugs was for recreational or social reasons. In general, to improve their athletic performance was the lowest ranked reason.

Findings from the survey (NCAA Research Staff, 2001) also break down patterns of drug use by racial/ethnic groups. The results of this survey can be observed in Table 7. It is worth noting that Caucasians have a more frequent drug use than blacks, with the exception of anabolic steroids. The racial/ethnic groups described as others fall sporadically throughout the table.

**Table 7. Patterns of Ergogneic & Social Drug Use, by Racial/Ethnic Group, Among Intercollegiate Student-Athletes in 2001**

| Drug Type | Caucasian (n=16,706) | Black (n=2,908) | Other (n=1,611) |
|---|---|---|---|
| Amphetamines | 3.6% | 1.7% | 3.9% |
| Anabolic Steroids | 1.3% | 1.5% | 2.7% |
| Ephedrine | 4.1% | 2.1% | 3.7% |
| Cocaine/crack | 1.8% | 1.1% | 3.7% |
| Marijuana/hashish | 29.2% | 21.9% | 26.2% |
| Psychedelics | 5.2% | 1.8% | 5.6% |

Note: *(NCAA Research Staff, 2001, Tables 4 & 5)*

The NCAA Research Staff (2001) did not provide similar type results, as can be seen in Table 7, for the male/female comparison. They did, however, list usage by specific sports. In Table 8 below, there is a side-by-side comparison of comparable men's and women's sports. Men typically had a slight edge over women in all areas of drug use, with the exception of amphetamines. In this case, the women had a slight edge of men, except in the sport of lacrosse, where the men were 4.1-percent more likely to use. Also, women softball players were 1.9-percent more likely to use marijuana then male baseball players were.

**Table 8. Patterns of Ergogneic & Social Drug Use, by Sport, Among Intercollegiate Student-Athletes in 2001**

| Sport | Amphetamines | Anabolic Steroids | Ephedrine | Cocaine /Crack | Marijuana | Psychedelics |
|---|---|---|---|---|---|---|
| Basketball (Men) | 1.4% | 1.4% | 3.0% | 1.3% | 23.6% | 2.6% |
| Basketball (Women) | 2.0% | 0.7% | 5.6% | 0.8% | 21.1% | 1.6% |
| Tennis (Men) | 2.2% | 0.6% | 3.8% | 1.6% | 27.4% | 3.0% |
| Tennis (Women) | 2.7% | 0.0% | 2.6% | 1.5% | 20.2% | 2.1% |
| Track/Field (Men) | 1.4% | 1.2% | 2.8% | 0.8% | 17.3% | 2.4% |
| Track/Field (Women) | 1.6% | 0.6% | 1.8% | 0.6% | 16.4% | 1.5% |
| Baseball (Men) | 2.7% | 2.3% | 3.3% | 1.3% | 26.9% | 4.0% |
| Softball (Women) | 3.9% | 0.8% | 2.5% | 1.3% | 28.8% | 4.0% |
| Lacrosse (Men) | 7.0% | 2.2% | 5.5% | 4.8% | 47.9% | 14.0% |
| Lacrosse (Women) | 2.9% | 1.6% | 1.8% | 1.5% | 42.4% | 3.8% |
| Soccer (Men) | 2.9% | 0.9% | 3.0% | 1.6% | 32.7% | 6.3% |
| Soccer (Women) | 4.6% | 0.5% | 6.7% | 1.2% | 32.4% | 4.8% |

Note: *(NCAA Research Staff, 2001, Tables 6 through 11)*

The USNA/NAAA "Exit Survey" does not differentiate between different types of drugs. It is therefore, difficult to predict who will have a higher perception of drug misuse among male and female midshipmen athletes. This is true due to the fact that there are some drug categories in which females have a higher drug usage then males, and other categories in which males take the top spot.

When analyzing the NCAA Research Staff's (2001) data, a few other finding emerge. It was found that the highest percentage of ergogenic drug use started in high school. Many of these high school students realize the

importance of athletic performance related to recruitment to a college or university (Schwenk and Costley, 2002). An athlete's recruit status, and blue-chip athlete status, will be analyzed from the USNA/NAAA "Exit Survey" data in light of this.

### *b. Drug Misuse Among Military Members*

In addition the rules and regulations imposed on midshipmen-athletes by the NCAA, all midshipmen, including athletes, must abide by Navy-wide policy. This current policy, as directed by the Chief of Naval Operations, states that:

> (1) Random urinalysis with 10% to 30% of all Navy personnel tested at the direction of unit commanders…,
>
> (2) More than 30% personnel testing with permission of higher headquarters,
>
> (3) "Unit sweeps" of all personnel in the unit, and,
>
> (4) "Probable-cause" urinalysis for specific incidents (Borack, 1998, p. 17)

The purpose of this policy is not only to detect drug use, but also to act as deterrence against future drug use. Borack (1998) found that approximately 56.5-percent of drug use is deterred due to the Navy's random urinalysis. The Naval Academy supports this current testing procedure and enforces it on a regular basis.

## E. CONCLUSION

Is a need for varsity athletics in colleges? Prior to the year 2000, many would argue that there is. However, given the recent limelight that several colleges, and even a service academy, have received due to unscrupulous behaviors, there is undoubtedly much of the populace that would argue in favor of college athletics. All colleges,

universities, and academies need to take a hard look at their athletic programs to ensure that their athletes are receiving, and acting in a way that displays, the right image the school wishes to have.

As Leskovich (2000) found in his thesis, the Navy benefits greatly from its varsity athletes. These individuals acquire the skills necessary to promote to Lieutenant Commander at a faster rate than their non-athletic classmates. This should come as no surprise to those who follow Navy sports. In a press release from March 1, 2005 (NavySports.com, 2005), the Naval Academy athletic program is ranked the seventh best out of 328 Division I institutions in the NCAA's Academic Performance Rate (APR). The question is this - are Naval Academy midshipman-athletes smart enough to abstain from the undesirable behaviors mentioned above (racial prejudice, sexual harassment, and drug misuse)? Will the trends from 2000 to 2004 show an increase in behaviors, or a decrease? One most certainly hopes that the perception rates of these three undesirable behaviors is already low, with a trend of getting lower.

Based on the research reviewed, it is expected that both race and gender will predict perceptions regarding sexual harassment, racial prejudice, and drug misuse. Further, we expect that athletic characteristics may be predictive of drug misuse. Due to limited research among athletes with respect to sexual harassment and racial prejudice, no specific prediction regarding athlete status and either sexual harassment or racial prejudice are made. However, this study will explore whether athletic

characteristics are significantly correlated with perceptions regarding each of these variables.

# III. RESEARCH METHODOLOGY

## A. INTRODUCTION

This chapter describes the data sets used in this study. It is divided into three major sections. The first section provides a description of the independent and dependent variables. The next section describes the Values Survey and the Exit Survey. Then the hypotheses of this thesis are addressed. Finally, the regression theory and regression models that will be utilized in Chapter IV are discussed followed by a chapter summary.

### 1. Values Survey Data

The first part of this study utilizes data obtained from the USNA Office of Institutional Research data warehouse (*Value Survey Data File*, 2002-2004). It includes data obtained from the survey being run in 2002, 2003, and 2004. It includes results by midshipmen from the classes of 2003 through 2007. The valid responses (n=8574) is larger than the number of midshipmen who completed the survey (n=5317) due to the fact that midshipmen were given the opportunity to take the survey their third-class, second-class, and first-class years (sophomore, junior, and senior years, respectively).

The Value Survey is a voluntary survey conducted by midshipmen enrolled at USNA. Although it is voluntary, it is also highly encouraged that midshipmen complete the survey. No participants' responses were eliminated from the data set. The purpose of this data analysis is to provide the study with a control group of questions of interest for all midshipmen, athletes and non-athletes alike.

The entire data set was reduced to include only one response from a single midshipman. This was accomplished by only taking data from a midshipman's response during his/her senior year, leaving the researcher with data from midshipmen from the classes of 2003, 2004, and 2005. The purpose of removing responses obtained through a midshipman's third-class, and second-class year was to provide some consistency with the NAAA Exit Survey data. More elaboration on this data set (NAAA Exit Survey) is provided below, but the responses kept for the NAAA Exit Survey were those of first-class midshipmen. Although valid responses (n=2735) were reduced, a substantial response rate was still provided.

**2. NAAA Exit Survey Data**

The second part of this study will provide a more in depth analysis of varsity athletes at USNA. This is accomplished through data obtained through the USNA IR data warehouse (*NAAA Exit Survey Data File*, 2001-2004). This survey and corresponding data file provided the crux of this study. Although the aforementioned Values Survey provides invaluable data, the main purpose of this thesis is to analyze the perceptions of varsity athletes. Data was obtained from USNA midshipmen varsity athletes. Midshipmen-athletes who participated in a varsity sport at USNA conduct this survey. This is done at the completion of their sport's season, in which their eligibility to continue participation in that sport has expired. The database contains data from this survey from the years of 2001 through 2004.

After the data were cleaned, a total of 723 participant's responses were included in the study.

Participants were members of the Brigade of Midshipmen from the classes of 2001, 2002, 2003, and 2004. Two participants were eliminated from the data, one from the class of 2002 due to missing data (unanswered questions) and one from the class of 2006 due to the fact that she has not yet graduated.

Participants may have taken the survey on more than one occasion. The survey was conducted at the completion of each sport season. Midshipmen whose eligibility had expired for a given sport were required to conduct the survey. This means that at the end of the fall sport season, a varsity football player who is no longer eligible to participate in football, is required to conduct the survey. However, that same player is still eligible to participate in a spring sport, and therefore must conduct the survey at the completion of that sport's season. On occasion, a player will play multiple sports, giving them the opportunity to conduct the survey on more than one occasion. That player, when conducting the survey, is to be reporting on the specific sport that their eligibility had just expired.

**B. DATA DESCRIPTION**

All data for this study was obtained from the data warehouse maintained by IR. The independent variables are made up of key characteristics and demographics for each midshipman. These variables are archived in the data warehouse for application to the various surveys IR conducts. This allows the researcher to align desired descriptive variables to a midshipman's response on any given survey based on a midshipman's unique identifier - a midshipman's alpha code.

## C. VALUE SURVEY VARIABLES

### 1. Independent Variables

The three independent variables summarized in Table 9 are used to determine if a participant's response to the Values Survey has any correlation to their independent characteristics. All independent variables are described below. The variables used are to examine midshipmen perceptions and experiences on sexual harassment and perceptions on racial prejudice at the United States Naval Academy. The variables are broken down into two types of characteristics: Demographic Characteristics and Athletic Characteristics.

**Table 9. USNA Values Survey Independent Variables**

| Variable | Data Type | Coding |
|---|---|---|
| Gender Status | Discrete | Male (0) / Female (1) |
| Ethnicity Status | Discrete | Non-minority (0) / Minority (1) |
| Athlete Status* | Discrete | Athlete (0) / Non-Athlete (1) |

Note: * denotes athletic specific characteristics

#### *a. Gender Status*

The gender code identifies whether or not a respondent is male or female. The ability to differentiate between male and female participants will allow the researcher to determine if the outcome variables differ according to gender. The variable is dichotomous, coded 0 for male and 1 for female. It is labeled as "gender_cR." The sample includes 420 females and 2315 males.

### *b. Ethnicity Status*

Participants are labeled by a specific ethnicity. The possible ethnicities include African-American, Asian-American, Caucasian, Hispanic, and Native American. Including ethnicity as a variable is useful in determining if the outcome variables vary according to ethnicity. For the purposes of this study, the individual's ethnic status was broken down into a dichotomous variable, where 0 was a non-minority (Caucasian) and 1 was a minority (all excluding Caucasian). It is labeled as "Minority." This sample includes 2235 non-minorities and 500 minorities.

### *c. Athlete Status*

Unlike the midshipmen who took the NAAA Exit Survey, in which all were athletes, participants who took the Values Survey were determined to be either athletes or non-athletes. Any midshipman who was ever a part of a varsity team, even just once, is classified in the database as an athlete. Including this variable in the study is necessary to determine if athletic status is a significant predictor of sexual harassment and racial prejudice perceptions at the Academy. For the purposes of this study, the individual's athletic status was recoded, where 0 was an athlete and 1 was a non-athlete. It is labeled as "varsity_athlR." This sample consists of 1329 athletes and 1406 non-athletes. If athlete status proves to be a significant variable, further analysis will be conducted on the athletic specific characteristics (sport type, varsity letter earned, recruit status, and blue-chip status).

### *d. Overall Breakdown*

The overall breakdown of all the independent variables can be observed in Table 10. The purpose of the breakdown is to provide an easy reference in which to view the frequencies of the independent variables.

**Table 10. USNA Values Survey Independent Variable Frequency**

| Variable | Frequency | Percent |
|---|---|---|
| Gender Code (gender_cR) | | |
| Male (0) | 2315 | 84.6% |
| Female (1) | 420 | 15.4% |
| Ethnicity Status (Minority) | | |
| Non-minority (0) | 2235 | 81.7% |
| Minority (1) | 500 | 18.3% |
| Athlete Status (varsity_athlR) | | |
| Athlete (0) | 1329 | 48.6% |
| Non-Athlete (1) | 1406 | 51.4% |

Note: * denotes athletic characteristics

## 2. Outcome Variables

There are three outcome variables of interest from the USNA Values Survey. A combination of several questions, the three outcomes address sexual harassment experiences, sexual harassment perceptions, and racial prejudice perceptions. These specific questions will be addressed below.

### *a. Sexual Harassment Experiences*

The outcome variable addressing a midshipman's sexual harassment experiences is obtained by taking the mean score of seven questions from the Values Survey:

> How often in the past year have you been subject to the following from other midshipmen:

(1) Unwanted whistles, hoots, or yells.

(2) Unwanted teasing, jokes, remarks, or questions.

(3) Unwanted looks, stares, or gestures.

(4) Unwanted or offensive e-mails/phone calls/messages.

(5) Unwanted pressure for dates.

(6) Unwanted touching or pinching.

(7) Demeaning or degrading comments.

The questions were measured on a Likert scale, with possible responses including "once a week or more," "2-4 times a month," "once a month or less," "once," and "never." Originally the scale corresponded a 1 with "once a week or more," ranging down to 5 for "never." This was recoded to provide a more logical number assignment to the amount of cases observed in a given month. This will also provide ease of data analysis as well. The full details of this recode can be observed in Table 11 below:

**Table 11. USNA Values Survey Sexual Harassment Experience Recode**

| Response | Original Score | Recoded Score |
|---|---|---|
| Once a week or more | 1 | 5 |
| 2-4 times a month | 2 | 4 |
| Once a month or less | 3 | 3 |
| Once | 4 | 2 |
| Never | 5 | 1 |

***b. Sexual Harassment Perceptions***

The outcome variable addressing a midshipman's sexual harassment perceptions is obtained by taking the mean score of three questions from the Values Survey:

> To what extent do you agree or disagree with each of the following statements:
>
> (1) Inappropriate physical advances of a sexual nature are a problem at USNA.
>
> (2) Sexual harassment has impeded my development as a midshipman.
>
> (3) Consensual sexual misconduct is a common occurrence in Bancroft Hall.

These questions were also measured on a Likert scale, with possible responses including "strongly agree," "agree," "neither agree nor disagree," "disagree," and "strongly disagree." In one year (Fall, 2004), the survey also offered the response choice of "no opinion." All "no opinion" responses were recoded into system missing data. Originally the scale corresponded a 1 with "strongly agree," ranging down to 5 for "strongly disagree." These were also recoded to provide the lower number score with the most desirable of responses. Again, this will allow for a more coherent data analysis. The full details of this recode can be observed in Table 12 below:

**Table 12. USNA Values Survey Sexual Harassment Perceptions Recode**

| Response | Original Score | Recoded Score |
|---|---|---|
| Strongly agree | 1 | 5 |
| Agree | 2 | 4 |
| Neither agree nor disagree | 3 | 3 |
| Disagree | 4 | 2 |
| Strongly disagree | 5 | 1 |
| No Opinion | 6 | SYSMIS |

### *c. Racial Prejudice Perceptions*

The outcome variable addressing a midshipman's racial prejudice perceptions is obtained by taking the mean score of two questions from the Values Survey:

> To what extent do you agree or disagree with each of the following statements:
>
> (1) Negative attitudes towards minority midshipmen are a serious problem at the Naval Academy.
>
> (2) Racial or ethnic prejudice has impeded my development as a midshipman.

Like the sexual harassment perception questions, these questions were also measured on a Likert scale, with possible responses including "strongly agree," "agree," "neither agree nor disagree," "disagree," and "strongly disagree." In one year (Fall, 2004), the survey also offered the response choice of "no opinion." All "no opinion" responses were recoded into system missing data. Originally the scale corresponded a 1 with "strongly agree," ranging down to 5 for "strongly disagree." These were also recoded to provide the lower number score with

the most desirable of responses. Again, this will allow for a more coherent data analysis. The full details of this recode can be observed in Table 13 below:

**Table 13. USNA Values Survey Sexual Harassment Perceptions Recode**

| Response | Original Score | Recoded Score |
|---|---|---|
| Strongly agree | 1 | 5 |
| Agree | 2 | 4 |
| Neither agree nor disagree | 3 | 3 |
| Disagree | 4 | 2 |
| Strongly disagree | 5 | 1 |
| No Opinion | 6 | SYSMIS |

### *d. Outcome Variable Descriptives*

Descriptive statistics for the three dependent variables (sexual harassment experiences, sexual harassment perceptions, and racial prejudice perceptions) are shown in Table 14. In the table, the total number of valid responses, range, minimum, maximum, mean, variance, skewness, kurtosis, and standard errors are provided.

**Table 14. USNA Values Survey Descriptives for Continuous Variables**

| Descriptive | Sexual Harassment Experiences | Sexual Harassment Perceptions | Racial Prejudice Perceptions |
|---|---|---|---|
| N | 2730 | 2688 | 2669 |
| Mean | 1.374 | 2.310 | 1.844 |
| Std. Error (Mean) | 0.014 | 0.014 | 0.016 |
| Median | 1.000 | 2.333 | 2.000 |
| Std. Deviation | 0.729 | 0.724 | 0.824 |
| Variance | 0.531 | 0.524 | 0.679 |
| Skewness | 2.463 | 0.500 | 0.887 |
| Std. Error (Skewness) | 0.047 | 0.047 | 0.047 |
| Kurtosis | 6.386 | 0.638 | 0.443 |
| Std. Error (Kurtosis) | 0.094 | 0.094 | 0.095 |
| Range | 4 | 4 | 4 |
| Min | 1 | 1 | 1 |
| Max | 5 | 5 | 5 |

## D. NAAA EXIT SURVEY VARIABLES

### 1. Independent Variables

The nine independent variables summarized in Table 15 are used to determine if participant responses to the NAAA Exit Survey items have any correlation with the independent variables. All independent variables are described below. The variables used are to examine midshipmen athlete perceptions at the United States Naval Academy. The variables are broken down into two types of characteristics: Demographic Characteristics and Athletic Characteristics.

**Table 15. NAAA Exit Survey Independent Variables**

| Variable | Data Type | Coding |
|---|---|---|
| Gender Status | Discrete | Male (0) / Female (1) |
| Female Sports* | Discrete | Female (0) / Coed (1) |
| Ethnicity Status | Discrete | Non-minority (0) / Minority (1) |
| Sport Type* | Discrete | Team Sport (0) / Individual Sport (1) |
| Varsity Letter* | Discrete | Yes (0) / No (1) |
| Recruit Status* | Discrete | Recruit (0) / Non-recruit (1) |
| Blue-chip Status* | Discrete | Blue-chip (0) / Non-Blue-chip (1) |

Note: * denotes athletic characteristics

***a. Gender Status***

The gender code identifies whether or not a respondent is male or female. The ability to differentiate between male and female participants will allow the researcher to determine if the outcome variables differ according to gender. The variable is dichotomous, coded 0 for male and 1 for female. It is labeled as "Gndr_dic." The sample consists of 136 females and 587 males.

If the gender variable results in a significant finding, one in which the significance is greater than 95%, then further analysis will be conducted. Labeled "F_Sprt_dic," the sports will be broken down into a dichotomous variable, coding female sports teams 0, coed teams 1, and all male teams as system missing. This sample consists of 124 female sport athletes, 85 coed sport athletes, and 514 system missing (male sport athletes).

***b. Ethnicity Status***

Participants are labeled by a specific ethnicity. The possible ethnicities include African-American, Asian-American, Caucasian, Hispanic, and Native American. Including ethnicity as a variable is useful in determining if the outcome variables vary according to ethnicity. For

the purposes of this study, the individual's ethnic status was broken down into a dichotomous variable, where 0 was a non-minority (Caucasian) and 1 was a minority (all excluding Caucasian). It is labeled as "Minority_dic." This sample consists of 610 non-minorities and 113 minorities.

***c. Sport***

Midshipmen were able to enter the specific sport in which they were reporting on. Results were included from all 29 USNA varsity sports. Including the sport variable will help the researcher determine if the outcome variables differ based on sport participated in. This study broke the athletic sports into a dichotomous variable in which 0 represents team sports and 1 represents individual sports, labeled as "Team_Sport_dic." Team sports versus individual sports can be seen below in Table 16:

**Table 16. Individual Versus Team Sport Listing**

| Individual Sports (1) | Team Sports (0) |
|---|---|
| Cross Country (M & W) | Baseball |
| Golf | Basketball (M & W) |
| Gymnastics | Crew (Hvywt, Ltwt, & W) |
| Rifle | Football |
| Squash | Football, Sprint |
| Swimming (M & W) | Lacrosse |
| Tennis | Sailing (Offshr & Intrcol) |
| Track, Outdoor (M & W) | Soccer (M & W) |
| Track, Indoor (M & W) | Volleyball |
| Wrestling | Water Polo |

Note: *(Modified from Leskovich, 2000, 32)*

By breaking down the sports in this fashion, the numbers are equally represented as much as possible (14 individual sports versus 15 team sports). The number of participants, however, is not equally represented. The sample consists of 503 team sport athletes, and 220 individual sport athletes.

***d. Varsity Letter Earned***

The Varsity Letter Earned ("Varsity_Ltr_dic") variable will show whether or not those varsity athletes who earned a varsity letter have a differing response when compared to those who were varsity athletes but did not receive a letter for their participation. This is a dichotomous variable where answering yes to earning a varsity letter is 0 and not earning a letter is 1. The sample consists of 660 varsity letter winners, and 63 athletes who did not earn a letter.

***e. Recruit Status***

The recruit status ("Rcrt_Stts_dic") is also a dichotomous variable. Recruited athletes to the United States Naval Academy receive a code of 0 while non-recruits are coded 1. This will help the researcher observe any differences in the outcome variables between recruited athletes and those that were not recruited (also considered walk-on athletes). The sample consists of 513 recruited athletes, and 210 non-recruits.

***f. Blue-Chip Athlete***

A blue-chip athlete ("BlueChip_dic") is a special type of recruit. That means that all blue-chip athletes are recruited, but not all recruits are blue-chip athletes. These blue-chip athletes are granted special consideration on their acceptance to the Naval Academy due to their athletic ability. These athletes still have to pass

certain minimums to be granted acceptance to USNA, however, they are also given more leeway than the average applicant. Again, this is a dichotomous variable in which 0 means the athlete is a blue-chip, and 1 means that they are not. The sample consists of 357 blue-chip athletes, and 366 non-blue-chip athletes.

***g. Overall Breakdown***

The overall breakdown of all the independent variables can be observed in Table 17 below. The purpose of the breakdown is to provide an easy reference in which to view the frequencies of the independent variables.

**Table 17. NAAA Exit Survey Independent Variable Frequency**

| Variable | Frequency | Percent |
|---|---|---|
| Gender Code (Gndr_dic) | | |
| Male (0) | 587 | 81.2% |
| Female (1) | 136 | 18.8% |
| Female Sports (F_Sprt_dic)* | | |
| Female Sports (0) | 124 | 59.3% |
| Coed Sports (1) | 58 | 40.7% |
| Male Sports (System Missing) | 514 | - |
| Ethnicity Status (Minority_dic) | | |
| Non-minority (0) | 610 | 84.4% |
| Minority (1) | 113 | 15.6% |
| Sport (Team_Sport_dic)* | | |
| Team Sport (0) | 503 | 69.6% |
| Individual Sport (1) | 220 | 30.4% |
| Varsity Letter (Varsity_Ltr_dic)* | | |
| Yes (0) | 660 | 91.3% |
| No (1) | 63 | 8.7% |
| Recruit Status (Rcrt_Stts_dic)* | | |
| Recruit (0) | 513 | 71.0% |
| Non-recruit/Walk-on (1) | 210 | 29.0% |
| Blue Chip Status (BlueChip_dic)* | | |
| Blue-Chip (0) | 357 | 49.4% |
| Non-Blue-Chip (1) | 366 | 50.6% |

Note: * denotes athletic characteristics

### 2. Outcome Variables

There are three outcome variables of interest from the NAAA Exit Survey. The three questions, already addressed in Chapter I, are:

(1) In your view, to what extent is sexual harassment a problem among ATHLETES at USNA? (Labeled "q59")

(2) In your view, to what extent is racial prejudice a problem among ATHLETES at USNA? (Labeled "q60")

(3) In your view, to what extent is drug misuse a problem among ATHLETES at USNA? (Labeled "q63")

Midshipmen athletes were able to provide one of three choices in responding to these questions: "not at all," "some extent," and "great extent."

**Table 18. NAAA Exit Survey Dependent Variables**

| Variable | Data Type | Range |
|---|---|---|
| Sexual Harassment Perception | Numeric | Not At All (1)/Some Extent (2) /Great Extent (3) |
| Racial Prejudice Perception | Numeric | Not At All (1)/Some Extent (2) /Great Extent (3) |
| Drug Misuse Perception | Numeric | Not At All (1)/Some Extent (2) /Great Extent (3) |

Due to the relatively low numbers who answered "great extent" in the above questions (eight answered this way for sexual harassment, none answered this way for drug misuse, and three answered this way for racial prejudice), as can be observed in Table 19, the outcome variables will be recoded into a dichotomous variable. This will combine all of the "some extent" and "great extent" answers into one variable of "any extent."

**Table 19. NAAA Exit Survey Dependent Variable Frequency**

| Variable | "Not At All" | "Some Extent" | "Great Extent" |
|---|---|---|---|
| Sexual Harassment Perception (q59) | 572 (79.1%) | 143 (19.8%) | 8 (1.1%) |
| Racial Prejudice Perception (q60) | 634 (87.7%) | 86 (11.9%) | 3 (0.4%) |
| Drug Misuse Perception (q63) | 686 (94.9%) | 37 (5.1%) | 0 (0.0%) |
| Sexual Harassment Dichotomous (q59_dic) | 572 (79.1%) | 151 (20.9%) | |
| Racial Prejudice Dichotomous (q60_dic) | 634 (87.7%) | 89 (12.3%) | |
| Drug Misuse Dichotomous (q63_dic) | 686 (94.9%) | 37 (5.1%) | |

## E. HYPOTHESES

The purpose of these analyses is to examine any difference between midshipmen athletes and non-athletes with regard to the "undesirable" dependent variables. Further study will observe the perceptions of midshipmen varsity athletes at USNA on these same "undesirable" characteristics, in addition to drug misuse, obtained through a different survey. These "undesirable" characteristics include sexual harassment, racial prejudice, and drug misuse. Based on the literature review, the following hypotheses are proposed:

(1) Females will be more likely to hold a higher perceived rate of sexual harassment than males.

(2) Minorities will be more likely to hold a higher perceived rate of racial prejudice than non-minorities.

(3) Team sport athletes will be more likely to hold a higher perceived rate of drug misuse than individual sport athletes.

(4) Recruited and blue-chip athletes will have a higher perceived rate of drug misuse than non-recruits.

(4) Females will be more likely to hold a higher perceived rate of racial prejudice than males based on the potential for them to be more sensitive to being a minority.

(5) Likewise, minorities will be more sensitive to sexual harassment than non-minorities.

The other variable (varsity letter winners) is to be analyzed to see if there are any other interesting variable linkages not addressed by the supporting literature review.

## F. REGRESSION THEORY

### 1. Linear Regression

A linear regression is used to evaluate the relationship of a continuous dependent variable to numerous independent variables. The purpose of a linear regression analysis is to predict the value of the dependent variable. This will provide the degree of the relationship of the variables, the importance of the independent variables (relative to the dependent variable), and the prediction of the dependent variable value (Tabachnick & Fidell, 2001).

#### *a. Linear Regression Equation*

The linear regression equation is:

$$Y = A + B_1X_1 + B_2X_2 + \ldots + B_kX_k$$

The predicted value of the dependent variable is Y, the Y intercept is A, the X's are the independent variables

(n=*k*), and the coefficients of the independent variables in the regression equation are the B's (Tabachnick & Fidell, 2001).

A multiple correlation (R) is calculated to determine how well the linear combination of independent variables predicts the dependent variable. R is a Pearson product-moment correlation coefficient between the dependent variable predicted results and the actual results. R ranges from 0 to 1. To better interpret R, it is squared, indicating the percent of variance the independent variables account for in the dependent variable (Tabachnick & Fidell, 2001).

***b. Linear Regression Types***

There are many types of linear regressions, including direct, hierarchical, and stepwise. A direct regression has all independent variables entered into the regression at the same time. This is useful if no hypothesis exists by taking into account the unique contribution of each independent variable. A hierarchical regression allows the researcher to specify the independent variable order of entry into the regression. This allows controlling for factors that prior research has shown will affect the dependent variable. By utilizing this method, the unique contribution of each independent variable is taken into account, in addition to the overlapping contribution of independent variables. It is important to enter the independent variables of concern in the last step of the regression when using a hierarchical regression. A stepwise regression has the inclusion and exclusion of independent variables based upon statistical tests. The

researcher has no input on which independent variables are included, or in which order they are included (Tabachnick & Fidell, 2001).

#### *c. Linear Regression Limitations*

There are a few limitations for linear regressions. The first on is that both the dependent and independent variables must be continuous. With this, a linear relationship between dependent and independent variables is assumed. Also, a linear regression can be confounded by too many or too few cases, and the absence of singularity is assumed with the absence of multicollinearity and outliers. The final limitation is that errors are assumed for normality, homoscedasticity, and independence. Causality is not implied when a dependent variable is significantly related to some independent variable (Tabachnick & Fidell, 2001).

### 2. Logistic Regression

Logistic regressions are used to predict discrete dependent variables from a group of independent variables that may be continuous, discrete, or both. The purpose of this is to correctly predict the outcome category for each case. This will allow for the prediction of group membership and the importance of independent variables (Tabachnick & Fidell, 2001).

#### *a. Logistic Regression Equation*

Unlike the linear regression model, the logistic regression equation is complex. The dependent variable below is depicted by Y, and is further explained as the probability of having one outcome or another based on the best linear combination of independent variables with two outcomes.

$$Y_i = e^u / (1 + e^u)$$

$Y_i$ is the estimated probability that the $i$th case ($I$ = 1,…,$n$) is in one of the categories and $u$ is the usual linear regression equation.

$$u = A + B_1X_1 + B_2X_2 + \ldots + B_kX_k$$

The constant is A, the coefficients are $B_j$, and the independent variables for $k$ variables are $X_j$ ($j$ = 1,2,…,$k$). This linear regression equation creates the logit, or log of the odds.

$$\ln (Y / (1-Y)) = A + \sum B_jX_{ij}$$

This is also simply the natural log ($\log_e$) of the probability of being in one group divided by the probability of being in the other group. Coefficients are estimated by converging on values that maximize the likelihood of obtaining observed frequencies (Tabachnick & Fidell, 2001).

The chi-squared statistic ($X^2$) determines the goodness of fit for a logistic regression, and is typically used in judging the independence of two variables. Because of this, the sample size and extent of the departure from independence limits it. It also does not reveal how the two variables are related, just the extent to which they are not. To avoid these limitations so that $X^2$ can determine the goodness of fit, $X^2$ is calculated on the difference in the log-likelihoods between the model. This includes the independent variables and the model including only the constant A (Tabachnick & Fidell, 2001).

### *b. Logistic Regression Types and Limitations*

As with the linear regression, there are direct, hierarchical, and stepwise logistic regression types. They hold the same benefits that the linear regression types holds, however, there are different limitations. The major limitation of the logistic regression is that the dependent variable must be discrete. One must also have enough cases in relation to the number of independent variables. An assumption is made of the linearity between continuous independent variables and the logit transformation of the dependent variable. As with the independence of errors, there must be an absence of multicollinearity and outliers. Lastly, significantly relating a dependent variable to some independent variables does not imply that the dependent variable is caused by the independent variable (Tabachnick & Fidell, 2001).

## G. MODELS OF REGRESSION

### 1. Linear Regression of USNA Values Survey

A linear regression will be used to analyze the data obtained from the USNA Values Survey. As stated previously, a linear regression is required due to the dependent variables being continuous. The regressions will be run utilizing the dependent variables addressed previously in this chapter for the three outcome variables.

The independent variables will be entered into the regression in two steps. The steps are determined by the two categories the data falls under. The first category will include demographic data (gender and ethnicity status), while the second includes the athletic data. If a midshipman's athletic status proves to be significant, another step will be added to include the athletic specific

data. Order of entry of the independent variables is depicted in Table 20. By performing the regression in this fashion, the unique effect by each group of independent variables on the variance in the dependent variable will be determined, taking into consideration the variance accounted for by the previously entered group of independent variables.

**Table 20. Order of Entry of Independent Variables for Regression Involving Data from the Values Survey**

| Step 1 | Step 2 | Step 2a (if needed) |
|---|---|---|
| Gender Status | (Gender Status) | (Gender Status) |
| Ethnicity Status | (Ethnicity Status) | (Ethnicity Status) |
| | Varsity Status | Team Sport |
| | | Varsity Letter |
| | | Recruit Status |
| | | Blue-Chip Status |

The results of the linear regressions will be looked at overall in addition by each individual variable. When looking at the overall results, the significance (p) will be checked to determine an entered variable's significance. Assuming significance of the variable, the *f* value and the Adjusted $R^2$ will then be examined, allowing for the determination of the variance accounted for by the independent variables. The individual variables will also have their significance (p) checked. Then the standardized regression coefficients (beta) will be compared to determine the weight the variable holds.

The linear regressions were performed utilizing SPSS version 12.0. The specific regression used from SPSS is linear, and can be found under the analyze-regression menu options.

**2. Logistic Regression of NAAA Exit Survey**

Of the dependent variables previously introduced in this chapter, six are comprised of discrete data that will be analyzed utilizing a logistic regression. The variables Gender Status, Ethnicity Status, Sport Type, Varsity Letter Earned, Recruit Status, and Blue-chip Status were coded so that they provided a dichotomous output. As the research theory states, a logistic regression must be used due to the dependent variables being discrete. Three regressions will be run for the three dependent variables being analyzed from the NAAA Exit Survey: Sexual harassment, racial prejudice, and drug misuse.

The independent variables will be entered into the regression in two steps. The steps are determined by the two categories the data falls under. The first category will include demographic data (gender and ethnicity status), while the second includes the athletic data (sport type, varsity letter earned, recruit status, and blue-chip status). The order of entry is depicted in Table 21. By performing the regression in this fashion, the unique effect by each group of independent variables on the variance in the dependent variable will be determined, taking into consideration the variance accounted for by the previously entered group of independent variables.

**Table 21. Order of Entry of Independent Variables for Regression Involving Data from the Exit Survey**

| Step 1 | Step 2 |
|---|---|
| Gender Status | (Gender Status) |
| Ethnicity Status | (Ethnicity Status) |
| | Sport Type |
| | Varsity Letter |
| | Recruit Status |
| | Blue-chip Status |

The results of each logistic regression will be analyzed overall, then by individual variable. For the overall analysis, the significance ($p$) will be checked first to see if the variables entered had any significance. Then the $X^2$ and the Nagelkerke $R^2$ value will be examined to determine the goodness of fit. The significance ($p$) will also be checked for the individual variable analysis to determine if the individual variable was significant within the step. Wald statistics and the odds ratio will then be compared to determine the weight of the significant variables.

The logistical regressions were performed utilizing SPSS version 12.0. The specific regression used from SPSS is binary logistic, and can be found under the analyze-regression menu options.

## H. SUMMARY

This chapter described the two data sets utilized for this study. The independent and dependent variables were also described, and the study hypotheses were presented. This chapter also presented the theory of the two different types of regressions used in the data analysis portion of this study. An overview of how these regressions will be

used for this study concluded the chapter. Chapter IV will use the regressions addressed in this chapter to analyze the dependent variables in order to determine the significance of varsity athlete perceptions on these "undesirable" behaviors.

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# IV. DATA ANALYSIS

## A. INTRODUCTION

This chapter presents the results of the correlation and regression analyses used to test the proposed hypotheses. The chapter is divided into two major sections which presents the results of analyses employing data from both the USNA Values Survey and the NAAA Exit Survey.

## B. USNA VALUES SURVEY

### 1. Correlation Analysis

Pearson correlation coefficients were computed among the three variables included in this study. Table 22 presents the first-order bivariate correlation coefficients for these nine variables. Although examination of the correlation matrix shows that 26 of the correlations are significant, the study is only interested in 16 of those correlations - those associated with the sexual harassment experiences, sexual harassment perceptions, and racial prejudice perceptions (shaded in the table).

**Table 22. Pearson's R Correlation Matrix for USNA Values Survey (N=2656)**

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. Gender Status | 1 | | | | | |
| 2. Ethnicity Status | .014 | 1 | | | | |
| 3. Varsity Athlete | -.107** | .064** | 1 | | | |
| 4. Sexual Harassment Experience | .292** | .038 | -.049* | 1 | | |
| 5. Sexual Harassment Perception | .168** | .072** | -.025 | .344** | 1 | |
| 6. Racial Prejudice Perception | .127** | .191** | -.060 | .284** | .632** | 1 |

Note: *Correlation is significant at the 0.05 level (2-tailed).
**Correlation is significant at the 0.01 level (2-tailed).

### *a. Sexual Harassment Experiences*

In the USNA Values Survey, a midshipman's experiences with sexual harassment were asked through several questions described in Chapter III. Data were recoded such that higher scores indicate greater sexual harassment experiences (a less desirable outcome). As shown in Table 22, there is significant correlation between gender, varsity athlete status, and sexual harassment experience. This result indicates that females are more likely to have reported they experienced sexual harassment more frequently than males. The results also show that non-athletes are less likely to report a sexual harassment experience than athletes. Ultimately, this result indicates that midshipmen who experienced sexual harassment were more likely to be females, and less likely to be non-athletes.

### *b. Sexual Harassment Perceptions*

Items assessing midshipmen's perceptions of sexual harassment were also included in the USNA Values Survey. As shown in Table 22, there is significant correlation between a participant's gender, ethnicity status, and sexual harassment perceptions. This result indicates that females, minorities, and those who experienced sexual harassment are more likely report more negative perceptions of sexual harassment than males, non-minorities, and those who did not experience sexual harassment. Ultimately, these results indicate that midshipmen with more negative perceptions regarding sexual harassment were more likely to be females, minorities, and also midshipmen who have actually reported having experienced sexual harassment as well.

### *c. Racial Prejudice Perceptions*

Two items addressing midshipmen's perceptions of racial prejudice were also included in the USNA Values Survey. Data were coded such that higher scores indicate more negative perceptions regarding racial prejudice. As shown in Table 22, there is significant correlation between racial prejudice perceptions and a participant's gender, ethnicity status, sexual harassment experiences, and perceptions. These results indicate that females and minorities are more likely to report a more negative perception regarding racial prejudice than males and non-minorities. Ultimately, this result indicates that midshipmen who perceive a higher rate of sexual harassment were more likely to be females, minorities, have experienced sexual harassment, and had a higher perception of sexual harassment.

### 2. Regression Analysis of USNA Values Survey

#### *a. Sexual Harassment Experiences*

Table 23 presents the results of the hierarchical linear regression analysis of the USNA Values Survey on a midshipman's sexual harassment experiences. The analysis incorporates several control variables to examine the unique effect of the demographic and athletic characteristics on a respondent's perception of sexual harassment among USNA varsity athletes. Displayed are the statistics for each of these independent variables entered in each of the two steps of the model. Beta weights (B) with standard error (S.E. B), standardized betas, and t statistics are also displayed.

The results of the hierarchical logistic regression analysis were not significant with regard to athletes. The results indicate that the gender variable was predictive of higher sexual harassment experiences. The model accounted for 8.5% of the variance in experienced sexual harassment rates (Adjusted $R^2$ = .085). The magnitude of the effect being an athlete was small (beta = -.016) and not significant. To further examine these results, a regression analysis was performed using only data for female respondents. The results indicate that no significant differences were found by ethnicity status or athletic status. This indicates that the significance of the model is due solely to a midshipman's gender.

**Table 23. Summary of Hierarchical Linear Regression Analysis for Variables Predicting Sexual Harassment Experiences**

| Variable | | B | S.E. B | beta | t |
|---|---|---|---|---|---|
| Step 1 - | Demographic Var. | | | | |
| | Gender | .586 | .037 | .290 | 15.828** |
| | Ethnicity Status | .059 | .035 | .032 | 1.721 |
| Step 2 - | Athletic Var. | | | | |
| | Gender | .582 | .037 | .288 | 15.654** |
| | Ethnicity Status | .062 | .035 | .033 | 1.779 |
| | Athlete Status | - .024 | .027 | - .016 | - .880 |

Note: $R^2$ for step 1 = .086. $\Delta$ $R^2$ for step 2 = .085. ** p < .001

### *b. Sexual Harassment Perception Regression*

Table 24 presents the results of the hierarchical linear regression analysis of the USNA Values Survey on a midshipman's sexual harassment perceptions. The analysis incorporates several control variables to examine the unique effect of the demographic and athletic characteristics on a respondent's perception of sexual harassment among USNA varsity athletes. Displayed are the statistics for each of these independent variables entered in each of the two steps of the model. Beta weights (B) with standard error (S.E. B), standardized betas, and t statistics are also displayed.

The results of the hierarchical logistic regression analysis were significant. Examination of beta coefficients indicate that gender and ethnicity status were predictive of sexual harassment perceptions; athlete status was not significant. The model accounted for 3.2% of the variance in perceived sexual harassment rates (Adjusted $R^2$ = .032). The magnitude of the effect being an athlete was

small (beta = -.016) and not statistically significant. To further examine these results, a regression analysis was performed using only data for female respondents. The results yielded no significance found for ethnicity status or athletic status. This indicates that the significance of the model is due solely to a midshipman's gender.

**Table 24. Summary of Hierarchical Linear Regression Analysis for Variables Predicting Sexual Harassment Perceptions**

| Variable | B | S.E. B | beta | t |
|---|---|---|---|---|
| Step 1 - Demographic Var. | | | | |
| Gender | .334 | .038 | .167 | 8.784** |
| Ethnicity Status | .126 | .036 | .067 | 3.548** |
| Step 2 - Athletic Var. | | | | |
| Gender | .332 | .038 | .166 | 8.695** |
| Ethnicity Status | .127 | .036 | .068 | 3.564** |
| Athlete Status | - .010 | .028 | - .007 | - .370 |

Note: $R^2$ for step 1 = .033. $\Delta$ $R^2$ for step 2 = .032. ** p < .001

### *c. Racial Prejudice Perception Regression*

Table 25 presents the results of the hierarchical linear regression analysis of the USNA Values Survey on a midshipman's racial prejudice perceptions. The analysis incorporates several control variables to examine the unique effect of the demographic and athletic characteristics on a respondent's perception of sexual harassment among USNA varsity athletes. Displayed are the statistics for each of these independent variables entered in each of the two steps of the model. Beta weights (B) with standard error (S.E. B), standardized betas, and t statistics are also displayed.

The results of the hierarchical logistic regression analysis were significant, indicating that gender, ethnicity, and athletic status were predictive of respondent's perceptions regarding racial prejudice. The model accounted for 5.4% of the variance in perceived racial prejudice rates (Adjusted $R^2$ = .054). Although the magnitude of the effect being an athlete was small (beta = -.057), it is worth noting that the impact of being an athlete on a midshipman's racial prejudice perceptions was significant even after controlling for both gender and ethnicity. Specifically, an midshipman-athlete is less likely to hold a higher perception of racial prejudice than their non-athlete counterparts. Another regression was performed, removing the athletic variable from step two and instead using athletic specific variables (sport type, recruit status, and blue-chip status) used in the NAAA Exit Survey analysis. The results yielded no significance found for racial prejudice perceptions. This indicates that although athlete status is a predictor of perceived racial prejudice, the athlete specific variables are not significant at predicting this measure.

**Table 25. Summary of Hierarchical Linear Regression Analysis for Variables Predicting Racial Prejudice Perceptions**

| Variable | B | S.E. B | beta | t |
|---|---|---|---|---|
| Step 1 - Demographic Var. | | | | |
| Gender | .282 | .043 | .124 | 6.564** |
| Ethnicity Status | .403 | .040 | .188 | 9.992** |
| Step 2 - Athletic Var. | | | | |
| Gender | .268 | .043 | .118 | 6.220** |
| Ethnicity Status | .411 | .040 | .192 | 10.183** |
| Athlete Status | - .094 | .031 | - .057 | - 2.997* |

Note: $R^2$ for step 1 = .052. $\Delta R^2$ for step 2 = .054. ** p < .001. * p < .05

### 3. Summary of Significant USNA Values Survey Findings

This section covered the results from the correlation and regression analyses performed in the USNA Values Survey part of this study. First, a correlation matrix showed the first-order, bivariate correlations between six of the independent and dependent variables. Lastly, the results of the three regressions performed in this study were presented. Gender proved to be the sole significant predictor of respondent's experiences and perceptions of sexual harassment. Gender, ethnicity, and athletic status were all significant predictors of racial prejudice perceptions. Further conclusion of these findings will be addressed in Chapter IV.

## C. NAAA EXIT SURVEY

### 1. Correlation Analysis

Pearson correlation coefficients were computed among the nine variables in this section of the study. Table 26 presents the first-order bivariate correlation coefficients for these nine variables. Although examination of the correlation matrix shows that 13 of the correlations are significant, the study is only interested in 6 of those correlations - those associated with the sexual harassment, racial prejudice, and drug misuse questions (shaded in the table). The other significant correlations are of no use in this study.

**Table 26. Pearson's R Correlation Matrix for NAAA Exit Survey (N=723)**

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| 1. Gender Status | 1 | | | | | | | | |
| 2. Ethnicity Status | -.032 | 1 | | | | | | | |
| 3. Sport Type | .182** | -.036 | 1 | | | | | | |
| 4. Varsity Letter | -.061 | .002 | .062 | 1 | | | | | |
| 5. Recruit Status | -.144** | .035 | -.185** | .180** | 1 | | | | |
| 6. Blue-Chip Status | -.020 | .006 | -.050 | .187** | .632** | 1 | | | |
| 7. Sexual Harassment Perceptions | .162** | .032 | -.007 | -.002 | .098** | .031 | 1 | | |
| 8. Racial Prejudice Perceptions | .078* | .140** | .018 | -.011 | -.026 | -.009 | .315** | 1 | |
| 9. Drug Misuse Perceptions | .017 | .038 | .037 | .017 | -.024 | -.022 | .298** | .257** | 1 |

Note: * Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed).

### *a. Sexual Harassment Correlation*

Midshipman-athlete's perceptions of sexual harassment were assessed with a singe item addressing the extent to which sexual harassment was perceived to be a problem among athletes at USNA. Data were coded dichotomously such that higher scores indicated more negative perceptions regarding sexual harassment. As shown in Table 26, there is significance between a participant's gender, recruit status, and sexual harassment perceptions. These results indicate that midshipmen athletes who answered "any extent" in the NAAA Exit Survey were more likely to be female and more likely to be a non-recruited athlete than those who answered "not at all." Also of note is the significance level with regard to the racial prejudice question and the drug misuse question, showing that those who had a perception of sexual harassment at "any extent" were more likely to observe the same with regard to racial prejudice and drug misuse.

To further examine these results, we computed a Pearson's r correlation to a participant's responses and the type of team. A dichotomous variable was created for female only sports (coded as 0), and coed sports (coded as 1). The results are presented in Table 27.

**Table 27. Pearson's Correlation Coefficients for Sexual Harassment 1 (N=182)**

| | Value | Approx. Sig. |
|---|---|---|
| Women's Sports vs Coed Sports | .032 | .650 |

As shown in Table 27, when comparing the response to the sexual harassment question, there is no significance as to whether or not the participant is a member of an all female sport or if the participant is a member of a coed sport.

Finally, another analysis was conducted to determine if there is significance among the specific sports that females participate in. This will include all female sports and coed sports. These sports will be given coded into a dichotomous variable, and correlated to all USNA varsity sports. The results are presented in Table 28.

**Table 28. Pearson's R Correlation Coefficients for Sexual Harassment 2 (N=182)**

| | Value | Significance |
|---|---|---|
| Women's Sports | | |
| Basketball | .036 | .333 |
| Crew | -.120** | .001 |
| Soccer | -.027 | .476 |
| Swimming | -.070 | .059 |
| Volleyball | -.013 | .724 |
| Cross Country | -.007 | .845 |
| Track | -.065 | .080 |
| Coed Sports | | |
| Intrcol. Sail | -.040 | .285 |
| Offshore Sail | -.119** | .001 |
| Rifle | -.027 | .476 |

Note: ** Correlation is significant at the 0.01 level (2-tailed).

The results above show that there is significance between a participant's response and their sport type for women's crew and coed, offshore sailing. This indicates that athletes who participated in female and coed sports (with the exception of women's crew and coed offshore sailing) were less likely to perceive sexual harassment as a problem than those who did participate in women's crew and offshore sailing.

***b. Racial Prejudice Correlation***

An item assessing midshipman-athlete's perceptions of racial prejudice examined the extent to which racial prejudice was perceived to be a problem among athletes at USNA. Data was coded such that higher scores indicated more negative perceptions regarding racial prejudice. As shown in Table 26, a significant correlation between a participant's gender status, ethnicity status, and racial prejudice perceptions exists. These results indicate that midshipmen athletes who answered "any extent" in the NAAA Exit Survey were more likely to be female and more likely to be a minority. Also of note is the significance level with regard to the sexual harassment question and the drug misuse question, showing that those who had a perception of racial prejudice at "any extent" were more likely to observe the same with regard to sexual harassment and drug misuse.

***c. Drug Misuse Correlation***

A single item assessed a midshipman-athlete's perceptions regarding the extent to which drug misuse was a problem among athletes at USNA. Data was coded so that higher scores indicated a more negative perception regarding drug misuse. As shown in Table 26, no

significant relationship between demographic and athletic variables were found with regard to drug misuse.

### 2. Regression Analysis of Data from the NAAA Exit Survey

#### *a. Sexual Harassment Regression*

Table 29 presents the results of the hierarchical logistic regression analysis of the NAAA Exit Survey on perceived sexual harassment problems. The analysis incorporates several control variables to examine the unique effect of the demographic and athletic characteristics on a respondent's perception of sexual harassment among USNA varsity athletes. Table 29 displays the statistics for each of these independent variables entered in each of the two steps of the model. Beta weights (B) with standard error (S.E. B), and odds ratio (Exp(B)) associated with each variable is also displayed.

The results of the hierarchical logistic regression analysis were significant. The chi-square ($X^2$) for step 1 is 18.273 with a significance (p) of less than .001. This indicates that the demographic variables were predictive of a higher perceived problem with sexual harassment among varsity athletes. The model accounted for 3.9% of the variance in perceived sexual harassment rates (Nagelkerke $R^2$ = .039). Females were 2.475 times more likely to report a perceived sexual harassment problem than males. Also of note is the impact recruit status has on a respondent's perception of sexual harassment. A non-recruited athlete is 2.624 times more likely to report a perceived sexual harassment problem than recruited athletes.

**Table 29. Summary of Hierarchical Logistic Regression Analysis for Variables Predicting Sexual Harassment (N=723)**

| Variable | | B | S.E. B | Exp(B) |
|---|---|---|---|---|
| Step 1 - | Demographic Variables | | | |
| | Gender | .906 | .211 | 2.475* |
| | Ethnicity Status | .249 | .246 | 1.283 |
| Step 2 - | Athletic Variables | | | |
| | Gender | 1.093 | .224 | 2.982* |
| | Ethnicity Status | .213 | .249 | 1.238 |
| | Sport Type | - .070 | .215 | .933 |
| | Varsity Letter | - .061 | .344 | .941 |
| | Recruit Status | .965 | .289 | 2.624* |
| | Blue Chip Status | - .409 | .268 | .665 |

Note: Nagelkerke $R^2$ for step 1 = .039. Nagelkerke $R^2$ for step 2 = .067 ($p < .008$). * $p < .05$

### *b. Racial Prejudice Regression*

Table 30 presents the results of the hierarchical logistic regression analysis of the NAAA Exit Survey on perceived racial prejudice problems. The analysis incorporates several control variables to examine the unique effect of the demographic and athletic characteristics on a respondent's perception of racial prejudice among USNA varsity athletes. Table 30 displays the statistics for each of these independent variables entered in each of the two steps of the model. Beta weights (B) with standard error (S.E. B), and odds ratio (Exp(B)) associated with each variable is also displayed.

The results of the hierarchical logistic regression analysis were significant. The chi-square ($X^2$) for step 1 is 16.920 with a significance (p) of less than .001. This indicates that the demographic variables were

predictive of a higher perceived problem with racial prejudice among varsity athletes. The model accounted for 4.4% of the variance in perceived sexual harassment rates (Nagelkerke $R^2$ = .044). Females were 1.807 times more likely to report a perceived racial prejudice problem than males, and minorities were 2.676 times more likely than non-minorities. None of the athletic variables entered in step two were significant.

**Table 30. Summary of Hierarchical Logistic Regression Analysis for Variables Predicting Racial Prejudice (N=723)**

| Variable | B | S.E. B | Exp(B) |
|---|---|---|---|
| Step 1 - Demographic Variables | | | |
| Gender | .592 | .264 | 1.807* |
| Ethnicity Status | .984 | .262 | 2.676* |
| Step 2 - Athletic Variables | | | |
| Gender | .558 | .273 | 1.747* |
| Ethnicity Status | .994 | .263 | 2.701* |
| Sport Type | .029 | .256 | 1.030 |
| Varsity Letter | - .058 | .436 | .944 |
| Recruit Status | - .174 | .337 | .840 |
| Blue Chip Status | .051 | .291 | 1.052 |

Note: Nagelkerke $R^2$ for step 1 = .044. Nagelkerke $R^2$ for step 2 = .045 ($p < .984$). * $p < .05$

### *c. Drug Misuse Regression*

Table 31 presents the results of the hierarchical logistic regression analysis of the NAAA Exit Survey on perceived drug misuse problems. The analysis incorporates several control variables to examine the unique effect of the demographic and athletic characteristics on a respondent's perception of racial prejudice among USNA

varsity athletes. Table 31 displays the statistics for each of these independent variables entered in each of the two steps of the model. Beta weights (B) with standard error (S.E. B), and odds ratio (Exp(B)) associated with each variable is also displayed.

The results of the hierarchical logistic regression analysis were not significant. The chi-square ($X^2$) for step 1 is 1.201 with a significance (p) of .549. This indicates that the demographic variables were not predictive of a higher perceived problem with drug misuse among varsity athletes. The model only accounted for 0.5% of the variance in perceived sexual harassment rates (Nagelkerke $R^2$ = .005). Also, none of the athletic variables entered in step two were significant.

**Table 31. Summary of Hierarchical Logistic Regression Analysis for Variables Predicting Drug Misuse (N=723)**

| Variable | B | S.E. B | Exp(B) |
|---|---|---|---|
| Step 1 - Demographic Variables | | | |
| Gender | .199 | .412 | 1.220 |
| Ethnicity Status | .430 | .414 | 1.538 |
| Step 2 - Athletic Variables | | | |
| Gender | .119 | .425 | 1.127 |
| Ethnicity Status | .451 | .415 | 1.571 |
| Sport Type | .304 | .363 | 1.355 |
| Varsity Letter | .325 | .569 | 1.384 |
| Recruit Status | - .141 | .515 | .869 |
| Blue Chip Status | - .149 | .436 | .862 |

Note: Nagelkerke $R^2$ for step 1 = .005. Nagelkerke $R^2$ for step 2 = .011 ($p < .818$). * $p < .05$

### 3. Summary of Significant NAAA Exit Survey Findings

This section covered the results from the correlation and regression analyses performed in the NAAA Exit Survey part of this study. First, a correlation matrix showed the first-order, bivariate correlations between nine of the independent and dependent variables. Further correlation was then conducted in those variables that proved to be significant, and in which further analysis could be conducted (female versus coed sports, all female and coed sports, and ethnicity). It was found that being a female and not being recruited were significant predictors of sexual harassment perceptions. It was also found that being a female and a minority were also significant predictors of racial prejudice perceptions. There were not significant predictors found for drug misuse perceptions.

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# V. CONCLUSIONS AND RECOMMENDATIONS

## A. INTRODUCTION

The purpose of this study was to examine perceptions of midshipmen-athletes of the United States Naval Academy regarding sexual harassment, racial prejudice, and drug misuse. An analysis examined the role of demographic variables (gender, ethnicity, and graduating year) as well as athlete specific variables (sport type, varsity letter winner, recruit status, and blue-chip status) on midshipmen perceptions regarding each of these behaviors.

## B. FINDINGS

### 1. USNA Values Survey

The USNA Values Survey analyzed all midshipmen with respect to sexual harassment experiences, sexual harassment perceptions, and racial prejudice perceptions. A summary of the findings is addressed below.

#### *a. Sexual Harassment Experiences and Perceptions Findings*

Results of linear regression analyses indicate that gender was the only significant predictor of midshipmen's sexual harassment experiences. Athletic status had no impact on either experiences or perceptions of sexual harassment. Furthermore, ethnicity status was a significant predictor of sexual harassment perceptions. The findings indicate that females and minorities perceived sexual harassment at a higher rate than males and non-minorities.

***b. Racial Prejudice Perceptions Findings***

Regression analysis involving racial prejudice and athletic, gender, and ethnicity status were significant. Athletes were more likely to perceive sexual harassment as a problem when compared to non-athlete midshipmen. Follow-up analyses controlling for the effects of gender on athletic characteristics were not significant.

**2. NAAA Exit Survey Findings**

Examination of the hypotheses with data from the NAAA Exit Survey indicated that athletic variables infrequently proved to be significant predictors of the "undesirable" behaviors.

***a. Sexual Harassment Perceptions Findings***

Gender and recruit status were significant predictors of sexual harassment perceptions. Females were more likely to perceive sexual harassment as a problem than males. Recruited athletes were also likely to perceive sexual harassment as a problem as compared with non-recruits. Correlation analyses indicated that there were no significant differences in sexual harassment perceptions between female sport athletes and coed sport athletes. Thus, playing on an all female sport or a coed sport had no significant impact on a midshipman-athlete's perception of sexual harassment. Examination of female sports revealed similar results. However, participating in women's crew and offshore sailing was significantly correlated with sexual harassment perceptions. Athletes on these two teams were more likely to perceive sexual harassment as a problem than female athletes participating in other sports.

### *b. Racial Prejudice Perceptions Findings*

Both gender and minority status were found to be significant predictors of racial prejudice perceptions among USNA varsity athletes. Females and minorities were more likely to perceive racial prejudice as a problem than males and non-minorities. Correlational analysis revealed that minorities were more likely to perceive racial prejudice as a problem than non-minorities

### *c. Drug Misuse Perceptions Findings*

No significant findings were found among any of the independent variables and the perceived rate of drug misuse. It was hypothesized that team sport athletes, recruited athletes, and blue-chip athletes would have a higher perceived rate of drug misuse. As the literature suggested, these types of athletes were shown to have a higher rate of use than individual athletes and non-recruits.

## C. DISCUSSION

The USNA Values Survey showed that being an athlete at the Naval Academy had no significant impact on a midshipman's experiences with or perceptions of sexual harassment. This could be due to the fact that the Naval Academy, and Navy as a whole, holds a very low tolerance for those who participate in sexual harassment type conduct. Midshipmen at the Naval Academy are also provided with extensive training on what is and what is not accepted behavior when dealing with the opposite sex. It is plausible that the perceptions among athletes elsewhere would hold different perceptions given that they do not fall under the same types of rules and regulations that a midshipman at USNA does.

Results did reveal significant differences with regard to racial prejudice perceptions. Athletes were less likely to perceive racial prejudice as a problem than non-athletes. Just as the midshipmen receive training on sexual harassment, they also receive it on racial tolerances. Based on this, one would expect that the results would be similar to those found for the sexual harassment perceptions (athlete status proved to be insignificant). However, it was found that the athlete variable was significant. Furthermore, that athletes were less likely to perceive racial prejudice as a problem. This result is possibly explained by the fact that there is a sense of camaraderie among both minority and non-minority athletes who participate on the same team.

The only other significant finding of note was with regard to the female-athlete population and their perceptions of sexual harassment in the NAAA Exit Survey. As hypothesized, females perceived a higher rate of sexual harassment than males. There were no significant findings between females who participated in a female only sport and those who participated in a coed sport. While it is possible to expect that those women participating in a coed sport would interact with male athletes, and therefore may have a higher perceived rate of sexual harassment, that was not the case. Female crew athletes and female offshore sailors were more likely to perceive sexual harassment at a higher rate. For the crew team, this could possibly be explained to their close proximity to the male crew teams at USNA. Both crew teams are based out of the same building and typically hold their practices at the same time. Due to these facts, the crew team possibly has a

higher interaction with the male crew teams more so than other female sports and their corresponding male sports. The coed offshore sailing team obviously also has a high interaction rate among male and female athletes. There could be something happening within these two sports that the Naval Academy Athletic Association might want to look in to.

## D. RECOMMENDATIONS

On the whole, the findings of this study were expected. Females experience and perceive sexual harassment at a higher rate than males. Minorities perceive racial prejudice at a higher rate than non-minorities. Previous studies that address the "undesirable" behaviors discussed in this study and their relationship on athletic achievement are limited. This thesis found relatively positive news with regard to these relationships. With the exception of those who experienced sexual harassment (as analyzed in the USNA Values Survey), all other athletic variables proved to be insignificant or significant in a positive way. Being an athlete is a significant predictor on lowered racial prejudice perceptions. It also means that being an athlete has no bearing on the other "undesirable" behaviors analyses that were conducted. With that said, we do not want to overlook the impact that being an athlete has on sexual harassment experiences. Although athletes are required to attend the same training on sexual harassment that non-athletes are required to attend, there appears to be a disconnect between the two types of midshipmen. A possible explanations are that perhaps the varsity athletes are not in fact getting the required training due to athletic commitments. Another is that female athletes possibly face

more scrutiny from the entire USNA student-body as a result of being an athlete. The NAAA Exit Survey did not reveal significant findings with regard to female perceptions of sexual harassment among other varsity athletes. This leads one to believe that the significant finding, from the values survey, means that the harassment is coming from the Brigade of Midshipman as a whole, regardless of athlete status.

While it appears that athletes are on par or better than their non-athlete counterparts at the Naval Academy, this study should be used as a starting point for further analysis among the differences between these two types of midshipmen. If the Athletic Association hopes to fully understand any differences among their athletes and the rest of the Brigade of Midshipmen, the Exit Survey should be readdressed. In addition to asking the questions dealing with a midshipman-athlete's perceptions, they should also ask these athletes about their own personal experiences. This will provide more fruitful data in which to analyze.

The following are specific recommendations suggested for follow-on research:

(1) A qualitative study analyzing the contributing factors making female athletes experience sexual harassment at higher rate than males.

(2) A qualitative study analyzing the contributing factors making minority athletes perceive racial prejudice at a lower rate than non-athlete minorities.

(3) A quantitative study analyzing other "undesirable" outcomes on midshipmen-athletes, such as

alcohol abuse, misconduct, and gambling. These other "undesirable" outcomes can be found in the NAAA Exit Survey.

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